

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XLIII, No. 4.
WEEKLY.

BALTIMORE, FEBRUARY 12, 1903.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE

Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.
FRANK GOULD, Secretary-Treasurer.

OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - \$4.00 a Year.
To FOREIGN COUNTRIES, - - 25s. 6d. a Year.

BALTIMORE, FEBRUARY 12, 1903.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

In a letter to the Manufacturers' Record the Southern Mantel & Grate Manufacturing Co. of Newport News, Va., writes:

We find that one of the first checks drawn by our company was for subscription to your journal, and we would not be without it for several times your price.

ASTRAY

Mr. James Duncan, first vice-president of the American Federation of Labor, in expressing hopes that the eight-hour bill promoted by the Federation will become a law, confuses the working people of the country with the small minority of wage-earners represented in the Federation, and displays a lack of information about the object of the bill when he says:

It never was the object of the promoters of this legislation that the bill should have reference to any employment except government work.

Mr. James O'Connell, another vice-president of the American Federation of Labor, in his statement before the Senate committee considering this bill, said:

We don't want to convey the idea to this committee nor to the opposition to this bill that our purpose is solely and purely to get an eight-hour day on government work contracted or subcontracted for, but we want the eight-hour day everywhere.

So, too, Mr. Samuel Gompers, president of the American Federation of Labor, was more explicit, for he said:

It is true that our American Federation of Labor does not represent the majority of the wage-earners.

Referring to men employed on government contracts, he said:

The purpose is to limit the hours of daily labor of such employees to eight per day. I will say further that the object is to have this bill enacted into law, so that it may be supplementary to our private efforts to secure a universal eight-hour day for all wage-earners in America.

In explanation of these private ef-

forts must be taken the words of Mr. Gompers:

It was the agitator who abolished slavery; it was the agitator that put laws upon the statute-books of our several States that saved the children in many States of our nation from being employed by these kind-hearted employers of labor. It is the agitators that now have their representatives in the Southern States to try and secure these same laws.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 56 and 57.

NATIONAL AID IN ROAD-BUILDING.

Progressive men of the South are showing deep, practical interest in the improvement of public highways, which appears in the action of State good-roads conventions held during the past week or ten days in Alabama, Arkansas and South Carolina. In all of these conventions steps were taken to induce local legislation for good roads, but their most interesting feature, perhaps, was their advocacy of the Brownlow bill now before Congress, providing for national, State and local co-operation in the permanent improvement of the highways. Such action is significant of the drift of the minds of the great mass of farmers of this country, and while many may oppose at first the appropriation by Congress contemplated in the Brownlow bill, simply because it has never been made before, when the proposition comes to be thoroughly considered in all its manifold relations to the people, the arguments in its favor, the hold which it has taken on the public mind and the great popularity which it will command may be expected to break down all opposition to the enactment of an efficient and equitable law.

The theory once was that the general government was to do nothing that the States could do for themselves. Had this theory been studiously observed it would be a valid objection to the passage of a road law by Congress. But in almost every function of the government this theory has been overridden in practice. Where, one may inquire, does the authority come from to improve a waterway confined exclusively to one State? This has been often done. Where does the authority come from to establish eleemosynary institutions for taking care of old soldiers or for special objects of charity? This is done by the government. Draw the line as closely as these doctrinaires would have us do, and the Military Academy at West Point, the Naval Academy at Annapolis, the many United States cemeteries, would find no warrant in the Constitution so positive and pronounced as the one for the building of postroads and post-offices. The latter is expressly granted, if not commanded, because they are necessary to carry out the purposes of the government. The former comes within the implied powers. The actual exercise of the power to build great

public highways has been used. The exercise of this power has the sanction of precedent; it has the sanction of usefulness and necessity, as well as the sanction of public approval. There is, therefore, as much reason why the people should demand an appropriation for the building of postroads as for any other purpose for which appropriations are granted, such as the improvement of rivers and harbors, the laying and collection of taxes, duties, imports and excises, the borrowing of money, the regulation of commerce with foreign nations and among the several States, and the establishment of postoffices. Congress is empowered by the Constitution "to make all laws which shall be necessary and proper for carrying into execution the foregoing powers," etc. If it is "necessary and proper" to build postoffices to carry out the postal regulations, is it not equally as "necessary and proper" to have satisfactory highways over which the mails may be carried from place to place? It looks like subtletized sophistry to say that Congress has the power to appropriate money for the building of postoffices and none for the building of postroads. It is a distinction without a difference.

Of all the instrumentalities ever put in operation by the general government no one is more highly appreciated by the country people than the establishment of the rural mail-delivery routes. The improvement of the roads is now necessary to carry out the high purpose of the law. The highways are used by the government, and the government should assist in keeping them in good condition. This rural delivery is at once the most beneficent, the most useful, the most inspiring and the most efficient means of increasing the intelligence of the people in the country districts that has ever been instituted by any government. Every part and parcel of this system should be perfected.

Is it not as much the duty of the government to supply the means by building roads for protecting their prosperity and property as it is to build great war vessels to do the same thing? Is it any more paternalistic to carry the mail to the country than to distribute it in the cities? Is it paternalism to improve the roads in the country for the purpose of facilitating the delivery of the mails, and not paternalism to erect boxes and build postoffices and employ carriers in the city for the same purpose? Why object to the good offices of the general government in doing that which States and counties and local governments have failed to do for a century? The people have control of the general government as much as they have of the State and county governments. If the improved highways are necessary to the welfare of the people, what difference does it make, except for good, whether the work of improving them is done by the people acting through the governmental agencies or through agencies created by the State or county? In whatever way it may be done it will be done for the people and

by the people acting under the direction of the people's public servants and at the people's behest. Whatever may be done most expeditiously, most economically and most effectively by the general government, with proper warrants under the Constitution for doing it, should be done, and done without cavil and for the good of the people.

To encourage trade, to increase the quantity and value of agricultural products, to enlarge our commerce with foreign nations by swelling the products of the soil, to add to the rational enjoyments of the people and increase their domestic happiness, to enlarge the capacity of the means for reaching markets, to make markets accessible during all seasons of the year, and, above all, to provide the agencies for bringing in close touch with the rest of the world the dwellers in the country, are high duties to be performed by the government, acting within its constitutional limitations.

A CLEAR EDUCATIONAL NOTE.

Several daily newspapers of the South have kept their wits about them in the midst of the blare and blazonry of this one-year-old Southern Education Scheme, and consequently have had the temerity to criticise it in spite of its array of distinguished names and its talk of much money. One of these papers is the News and Courier of Charleston, S. C. Commenting upon the completion, after nine months, of the chartering of the General Education Board, it says:

A great many stories have been printed in the newspapers and magazines about the Board and its good intentions, and several tours of observation have been made through the South, and much comfort has been derived from the "conferences" which have been held in the South. Certainly it can never be said that the Board has tried to hide its light under a bushel; on the contrary, it has advertised itself and its proposed campaigns against illiteracy in the South with almost as much activity as if it were a traveling troupe of troubadours making only one-night stands in the country.

The Board is doubtless sincere in its self-created mission, and we are sure that those who have contributed so generously to the funds with which the Board will do business deserve the thanks of the people of the South whom they would help. The success of the Board will depend, of course, not so much upon the amount of money it will be able to lavish on the free schools in the rural districts of the South as upon the real spirit behind the movement. If it is the purpose of the Board only to open the eyes of the blind so that they may see, and not to indoctrinate the unlettered people of this part of the country with strange theories as to the oneness of the human race and the brotherhood of man, the white people of the South will welcome the aid which the Board can give to the simple and only proper work of the schools. Every child in the South ought to be able to read and write, and taxation for the support of the free schools is taxation for the protection of society. There is room enough for the General Education Board in the South, although the work which it contemplates could be done as well probably by the agencies already existing.

Returning again to the subject upon the announcement of a possibility of an absorption of the Peabody fund by the General Education Board, the News

and Courier waxes a bit sarcastic when it says:

Of course, we must get away from the old fellows and their notions. Education is just like any other sort of business, and it ought to be managed after the manner of a great modern department store and the whole thing be divided into convenient groups, with the toys for the little folk down in the basement, the white goods along the steenth street side and the furniture polishing on the seventy-sixth street floor front. There must be no sentiment, no traditions, no poetry of feeling or instinct; there must only be so much education for so many dollars. It is a great plan. We wonder how it will work out in the end?

The Southern Education Scheme has developed no reason why it should be supported by the South, especially as it is preaching "strange theories as to the oneness of the human race and the brotherhood of man" in education, but more especially because it is teaching dependence in education, and thereby threatening to induce the most grievous kind of miseducation. How that will work out in the end, if not checked, is not difficult to foresee.

ANTI-TRUST LEGISLATION.

All anti-trust legislation, so-called, is designed for political effect. The leaders of both the great parties know, and well know, that to enact such legislation will be to put all the power to create or repress industrial establishments and activities into the hands of the federal officials. Who wants this done?

This anti-trust legislation is ill-advised, charged with danger, and is an experiment fraught with many possible issues of dire import. When small railroads all over the country began to consolidate their short lines the cry was raised among the timid and unthinking that monopolies were being created, yet by reason of these consolidations freight rates have been reduced one-half and in many instances two-thirds, while the passenger service is so satisfactory that one may now take a Pullman car and go to every part of the country without change and with the greatest comfort, while his baggage is absolutely safe through the checking system and travels *pari passu* with himself. Still further, the railroad managers, while giving better service in every way, are now able, by the reduction of expenses, to equip their roads, improve their tracks and extend their service to all parts of the country. Accidents have been decreased, railroad hands and officials are better paid, and the people get better rates. Who would now dis sever these great links and go back to the primitive methods of having to change cars every hundred miles or so, and oftentimes to wait weary hours for connections?

Before the building up of great establishments for the manufacture of agricultural implements an ordinary hoe, retail, was worth a dollar without the handle; now the same hoe, with handle, is worth thirty cents. A two-horse plow cost then from \$12 to \$15; a better plow is now sold to the farmer for \$6. Reapers, when first made, crude and unwieldy as they were, brought from \$150 to \$250. A better reaper, with self-binding attachment, is now on the market for \$100. And so this list might be extended to buggies, wagons, gear and every implement of cultivation or transportation now in use among the farmers of the nation. This anti-trust legislation is, therefore, an experiment, the outcome of which would in the end, in all probability, be far more disastrous to the industries of the country than any trusts could be.

But this is not all. Insert once the small point of federal intervention into the private business of the country by anti-trust legislation, and the time may come when the simplest concerns may have to consult federal officials before engaging in business. If two neighbors living on adjoining farms wish to consolidate their business, who in this land of freedom ought to have the power to place an edict on such partnership? And so if all the farmers of a township, county or State wish to combine, should anyone be invested with such transcendent power as to stop it? If this is true for the farmers, why should it not be true for the iron interests, the lumber interests, the fertilizer interests? One thing should always be borne in mind—that in a country so wide in its domain, so great in its influence, so vast in its natural resources, so abundant in the command of skilled labor, with such a great diversity of employment and of resources, trusts cannot injure it for a long period. These facts are simple ones. It ought not to be necessary to rehearse them. For that the only justification is the necessity to deal in elemental facts in the face of demagogic anti-trust agitation.

The American people are wise enough and strong enough to take care of themselves. Whenever any combine becomes oppressive it will be met by the invincible spirit of the people, who are not now nor ever have been oppressed for any great length of time by any agencies whatever, be they physical, legislative, social or religious. American manhood is now, as it always has been, equal to every emergency. A free people do not fear themselves.

There are doubtless many things in the management of combines that should be regulated by law, but the laws already in force are sufficient for this purpose. The tendency of the age is to combine labor with capital, the rich man with the poor man. Employees are now encouraged and given favorable opportunities for becoming stockholders in the corporation for which they work. This is a great advance, and will lead to a higher and better citizenship. The pessimist sees only the evil, the optimist the good, but between these extremes the philosophical observer may dimly discern through the mists of prejudice and passion the tendency of the age leaning towards universal liberty, universal helpfulness and universal good.

ANOTHER COAL STRIKE?

It was announced two or three weeks ago that there was a possibility of a strike in the bituminous coal fields of West Virginia in April next. Perhaps the preliminaries of an attempt at such a strike were unintentionally revealed in the course of proceedings of the conference at Indianapolis between representatives of the operators and of the miners of Indiana, Illinois, Ohio and Western Pennsylvania. At this conference, according to a dispatch from Indianapolis, John Mitchell of the United Mine Workers intimated that either there would be a new wage scale or there would be a general strike of miners throughout the bituminous field on April 1. This notice brought from a representative of some operators a demand that if the operators were compelled to meet certain conditions, the conditions should be the same in all sections. He pointed to West Virginia, where the miners were not unionized, and where, according to him, the workers were employed a greater number of

hours and the production was cheaper and greater, and he said that the operators in the competitive field were compelled to meet this coal in open market.

In this episode are rather distinct indications of factors entering into the origin of strikes and an explanation of them. Judging by the past, it may be safely said that if a strike in the bituminous fields shall be started on April 1, it will be largely nominal in the trans-Ohio region, if, indeed, by agreement, it has not been obviated there, but in West Virginia will duplicate, or rather attempt to duplicate, the program essayed in the anthracite field of Pennsylvania, where one of the main objects developed since the strike was the driving of the anthracite workers into the United Mine Workers' organization, with an equalization of conditions of trans-Ohio bituminous operators and the anthracite operators.

THE USELESSNESS OF COMMISSIONS.

Interesting suggestions bearing without intent upon commissions in general, and especially upon commissions supposed to be investigating social problems, are made in comments by the London Iron and Coal Trades Review upon the recent visit to the United States of what it calls "the admirably stage-managed commission of trades-union delegates, organized by a gentleman of whom, in all probability, the great majority has never even heard before, for the ostensible purpose of enabling the leaders of the trades-unionist bodies in this country to see for themselves how American labor compares with the British in its methods, its aims and its results." The Review does not seek to prejudice economic interest in whatever reports the commission may make, but it points to the irresponsible character of the commission, as far as English employers and employees are concerned, and says:

Our own opinion, for what it may be worth, is that an entirely exceptional opportunity of educating British workmen in American methods, and of recognizing by common agreement, and afterwards applying some of the more fundamental conditions of American labor supremacy, has been lost. Whether this is due to the fact that British employers were not favorable to the scheme, or because they were not consulted as to how it should be effectuated, or for other reasons, it is not for us to say. The labor leaders have gone to the United States largely as private individuals, and, of course, as private individuals their views as to American methods and ideas are worth just as much as those of other private individuals, no more and no less. Nor is it easy to see how those views, even at the best, could be otherwise than superficial and confused, having regard to the shortness of their stay in the country. American industrial conditions cannot be mastered by the most Heaven-born of assimilators in a few weeks. The very basis of the problems they profess to have investigated must have been neglected. How many of the cotton unionists visited the Southern States to see how cotton is grown, marketed, shipped and applied to collateral industry? How many of the iron-trade unionists visited the great mines of Lake Superior in order to estimate the natural resources of the United States and to learn how the raw materials are mined, handled, stored and transported? And how many kindred problems of fundamental interest have been ignored by the unionist leaders chosen as representatives of other industries? At the most the commission can only have skimmed the surface of affairs, and we all know the serious dangers that lurk in imperfect knowledge. In order to have made such a commission of substantial value, its members should have lived in the United States for three to six months at the least, and should have mixed freely with their compeers, instead of mainly with the employers. Thus, and thus only, could they have been able to make a true and useful comparison of the labor conditions of the two countries. We hope the

time has not yet gone by when such a project can be organized. It would pay British employers to get at the bottom facts of the matter, but the bottom facts, so far from lying on the surface, have often, like truth, to be sought for in out-of-the-way places.

This characterization is applicable to other countries than England, and to responsible commissions as well as irresponsible ones. The United States has been inflicted with a great many commissions, voluntary or the result of legislative or executive appointment, in recent years, and few of them have been of any material value to anybody besides the members of the commissions who have drawn salaries, or the demagogues or other self-seekers who have thereby been given a little ephemeral notoriety. The country is even now laboring with a typical commission, that investigating the coal strike, and the majority of its members, while undoubtedly earnest and sincere in their desire to accomplish something of benefit to their country, must share the hopelessness of the country, based upon the remarkable circumstances of its origin and the accompaniments of its investigations. It has, to be sure, given wide publicity to facts which have long been known to students of industrial conditions in the country, but it has brought forth no material likely to be of use in the conservative solution of the problems arising from those conditions; but, on the other hand, as is usually the case, has merely contributed to the difficulties surrounding them. The scope of the inquiry, just like that of the visiting Englishmen, has been too superficial and too limited to elicit fundamental information, and while the sociologist may have found through it some additions to his store of knowledge, he has been given nothing to aid him in formulating suggestions of relief.

Mr. J. C. Monaghan, formerly United States consul at Chemnitz, Germany, and now a member of the staff of the College of Commerce of the University of Wisconsin at Madison, in a letter to the editor of the Manufacturers' Record writes as follows:

Your pamphlets on the South came duly. I was delighted when I saw them. I will look them over at once and read and study them later. The South owes you and your paper a debt of gratitude that it can never pay. The true man in the South follows the South's "noblesse oblige." The South is chivalrous. Your reward will come when you see the South emerge and go forward to a first place among industrial and commercial sections. I say to people up here "Go South, young man—go South." It is a wonderful section, with the coal, iron and limestone in its hills, vast water-courses to give it cheap transportation, and with a canal to be cut. It wants and will want for its full development industrial, commercial and technical education—the education of the head, the hand and the heart. Add these to the three Rs, and we will get an education such as old Socrates wanted to give to the Greeks.

For a Kindling Factory.

Mr. M. F. Reese of No. 124 Brook avenue, New York, writes to the Manufacturers' Record that he would like to have information about localities along the James river in Virginia suitable for the establishment of a kindling-wood factory. He will consider no location unless it has water communications with large cities of the North and an ample supply of timber convenient and cheap.

The movement of grain for export through New Orleans in January made the record of 5,031,850 bushels, and fifty-two large ocean-going steamers were required to handle the shipment.

A STUDY OF THE MT. PLEASANT PHOSPHATE DISTRICT.

By J. B. KILLEBREW.

[Written for the Manufacturers' Record.]

The discovery of phosphate rock at Mt. Pleasant in 1896 was an event that has led to most important results. This phosphate, unlike that discovered at an earlier date in Hickman and Lewis counties, is richer in phosphoric acid, while it is mined at smaller cost, owing to the fact that the stratified deposits lie near the surface, so that the overburden may be removed, and the rock is so soft that nothing but a pick and shovel are required to dislodge it from its original bed. There are nine phosphate companies at work mining rock in the Mt. Pleasant district or preparing to do so in a short time. Beginning at a point southwest of Mt. Pleasant, about midway between that place and Sandy Hook, the mines following in succession going northeast and keeping on the line of railroads are:

Natural Acid Co., one mine.
Charleston Mining Co., two mines.
Bluegrass Phosphate Co.
Petrified Bone Mining Co.
Columbian Phosphate Co.
Central Phosphate Co.
Tennessee Phosphate Co., two plants.
American Phosphate Co.
Charleston Mining Co. (Ridley mine).
International Phosphate Co.

In addition to these mines may be mentioned the Southport deposits, belonging to the Southport Phosphate Co. These deposits are said to cover a large area. They lie about twelve miles east of the Nashville, Florence & Sheffield Railroad and a less distance to the Decatur division of the Louisville & Nashville Railroad, and on the west side of it.

The Harlan Place, where good beds of rock occur, lies five miles west of Ashwood, a station on the Nashville, Florence & Sheffield road between Mt. Pleasant and Columbia. No railroad is yet built to reach the Southport beds, though one is completed in that direction for the distance of six miles. A railroad is now building to the Harlan Place.

The Mt. Pleasant district is supplemented by some good beds of phosphate rock in the vicinity of Carter's Creek Station, Kleburne and Ewells, on the main line of the Louisville & Nashville Railroad between Columbia and Nashville. The Charleston Mining Co. and the Virginia & Carolina Phosphate Co. have opened mines in this supplementary field, but the latter mine has been leased to the International Phosphate Co.

The shipments from the Mt. Pleasant district for the year 1902 were approximately 350,000 tons. For the nine months ending September 30, 1902, the shipments from that point were 257,762 tons, which, in the same proportion for the remaining months, would give 343,683 tons for the year. It has frequently been asked how long will these phosphate deposits last at the present rate of production. It is impossible to arrive at anything like a correct estimate of the amount of unmined rock, but the most conservative judges and those who have had the largest experience in mining the rock and have studied the field most closely do not think over one-fourth of the original supply has been removed. If this is true, there remain something near 6,000,000 tons yet in the ground, for best information at command shows that 1,784,997 tons have been shipped from the Mt. Pleasant district alone. Assuming an output of 350,000 tons annually, the amount in sight will last a little over seventeen years, allowing that no new discovery will be made during that period, but if new discoveries

double the accessible phosphates, which is not at all improbable, the deposits will not be exhausted for a full generation. The spot value of the phosphates already mined in this district is approximately \$5,000,000, and the amount paid to the railroads for distribution will equal or surpass this sum, making at least \$10,000,000 that have been added to the business of the country from this one locality. Assuming a like proportion of value for the unmined rock, \$15,000,000, added to cost of distribution, \$15,000,000, and it will appear that the Mt. Pleasant phosphate field has contributed and will contribute \$40,000,000 to the world's business, without counting anything on future discoveries or anything for contiguous fields at Carter's Creek, Kleburne and Ewells, from which about 40,000 tons are shipped annually.

What has been the effects of the discovery of phosphates on Mt. Pleasant itself? In the first place, the population has increased in seven years from 450 to over 2000 within what are now the corporate limits. Outside of the corporation there is probably a population of from 3000 to 5000, mainly of the nomadic, peripatetic, restless negro race, that are ever shifting from phosphate fields to iron furnaces and iron mines, or to places where railroad construction is going on, or to charcoal collieries started, or where cotton-picking is urgent, or some other occupation offering, for the time, a little larger pay per diem. This thriftless population, usually good-natured and manageable by white bosses, is a drawback to the place in a social way. Highly-cultivated people are averse to carrying their families where the environments are clogged with such an unattractive and unpromising social element. Nevertheless, among the old residents there is a great deal of culture and refinement and aristocratic display. Many of the old families have borne conspicuous parts in the history of the State. In this vicinity James K. Polk lived. His blood relatives owned many thousands of acres of the best and most beautiful lands in Tennessee, nearly adjoining the town. Gen. Gideon E. Pillow, who was a famous character in his day, lived and owned a large property in the vicinity. The Granberries, Friersons, Ridleys, Orrs, Longs, Jacksons, Kittrells and many others have long been noted for their sterling worth, cultivation, abundant wealth and high social position.

The negroes are good miners, but inveterate gamblers. They bet their money with a reckless abandon that is astonishing and criminal. Sometimes, and especially on Sunday forenoons, a dozen groups may be seen within the mining area closely clustered around a "crap-shooter," leaving a small circular space free in the center. The ground within the limits of this circle is often literally covered with silver coins. The fascination for this game among the negro miners is beyond comprehension. When one loses all his week's salary he philosophically turns away, borrows a few meals, and on Monday draws on the commissary for his daily supplies until he begins to catch up about the middle of the week. These miners are paid in proportion to the work done. They can make easily from \$1 to \$3 a day, but for the amount of good they get out of it it had just as well be 50 cents as \$5, for not one in a hundred saves anything whatever or looks to making provision for the future. There is another distressful, demoralizing and discouraging fact that arises from the

aggregating of so many negroes who have ready money. Many do not gamble, but they drink, quarrel, fight and indulge in orgies disgusting to the sober-minded or religiously inclined. And yet these dissensions are confined to themselves except in very rare cases. White people are seldom molested. Occasionally a drunken bully will resist an officer, but he always comes out second best. While these negro miners have many moral weaknesses, and are thriftless to a degree that characterizes no other nationality, they are preferred by the operators of the mines to any other race whatever. Italians and a few foreigners of other nationalities have been tried, but they neither do so much work nor are so agreeable to white bosses as the negroes. A curious fact was developed in my inquiry. A well-known superintendent of one of the largest mines never refuses to go on a bail bond for the most dissipated and lawless of his miners, and, strange to say, he has never had one to forfeit his bond by running away. There seems to be an unwritten law among the negroes that whatever crime one may be guilty of, the greatest of all crimes is to make the boss pay for taking one out of the calaboose. This spark of honor is highly creditable to the race, and shows that the sense of gratitude is more powerful with them than the sense of justice, for a negro rarely concerns himself about his debts. It is said, with truth, that the negro is the best collector in the world and the poorest paymaster.

The improvements in the town proper have been very considerable. Nearly all the old dilapidated houses have either been burned or been torn down, and some very good blocks of brick buildings have been erected in their place. Many handsome residences have gone up, and many beautiful cottages also. Rents are high, and during the greatest business activity houses for rent are scarce.

No manufacturing concerns have been established as the result of this mining industry, excepting crushers, cleaners and other agencies for preparing the rock for market. The farmers in the immediate vicinity are prosperous. Home markets are excellent. Everything in the way of meat, meal, flour, vegetables, butter, milk, eggs, poultry, etc., goes off at good prices. Labor, however, on the farms is hard to control, because the farmers cannot pay as much as the mine owners, and good hands are hard to keep on the farms for this reason.

The greatest benefit which the State of Tennessee has derived from the phosphate discovery is in the number of fertilizer plants that have been established. Before these beds of phosphate were worked there was only one large fertilizer factory in Nashville, located within three miles of the city. There are now seven, with a combined capacity of 200,000 tons of fertilizers annually. Three of these will make each 50,000 tons a year. A report published a week or two ago stated that there were now on hand in the various factories 80,000 tons of fertilizers awaiting shipment. The value of this quantity, approximately, is \$1,600,000, and this is less than half the capacity of the aggregate works.

The Virginia-Carolina Company has recently built a fertilizer factory in Memphis with a capacity of 30,000 tons per annum. There is also another in Chattanooga. Tennessee phosphate rock supplies the factories to a large extent at Atlanta, Macon, Columbus and Rome in Georgia; one each in Birmingham, Montgomery, Mobile, Opelika in Alabama; one each in Meridian and Jackson, Miss.; one in New Orleans, La. The rock is shipped to Cincinnati, Columbus and Cleveland, Ohio; to Buffalo, N. Y.; Detroit, Mich.;

Chicago, Indianapolis, St. Louis, Philadelphia, and in small quantities to a large number of other cities. Between one-fourth and one-third of the entire output from the Mt. Pleasant mines is shipped to Europe, and is distributed most largely in France, England and Germany. The price of export rock varies from \$3.50 to \$4.50 per ton. It must be well cleaned; it must run high in phosphoric acid and low in iron and alumina; in fact, 78 per cent. of the phosphate of lime, not more than 2½ per cent. of iron and alumina, with a small content of moisture, not exceeding 1 or 2 per cent., are the requirements for export rock. All below this is known as domestic rock.

The improvement in agriculture is manifest in many parts of Tennessee. A good many farming areas in places heretofore considered of but small value from an agricultural point of view have become productive. An instance of what good commercial fertilizers will do was brought to the attention of the writer recently. A gentleman living in Lewis county, Tennessee, sowed sixty acres of wheat where the soils belonging to the siliceous group of the Mississippi formation have always been regarded as sterile. On this field some 150 pounds per acre of acid phosphate were applied at the time of sowing. The yield was surprisingly large, being twenty-six bushels per acre on land that without fertilizers would not have yielded ten bushels per acre.

In Coffee county, Tennessee, where a large number of intelligent immigrants from the North have recently settled upon soils of the same character as those which are found in Lewis county, the wheat crop is now regarded as probably the most profitable one grown. It is not unusual to reap thirty bushels per acre from land that twenty years ago was not considered as at all suited to the production of any cereal crops whatever. Many worn-out fields that were turned out as worthless have been restored by proper fertilization. It would be difficult to enumerate all the benefits to the State of Tennessee and to the South that have come from the discovery of the phosphates in Tennessee. For several years it was considered sufficient to apply fertilizers with the acid phosphate as the base, but experience has demonstrated the fact that it is necessary, in connection with the fertilizers, to preserve the humus in the soil so as to give it friability and moisture. It is the custom now with good farmers to sow cow-peas, clover, soja beans or some similar crop to meliorate the condition rather than to increase the fertility of the soil, though these leguminous plants do both. No other discovery has ever been made in Tennessee that has distributed so much money in such a short time as the discovery of phosphates at Mt. Pleasant.

The Southern Outlook.

L. W. Hammond, secretary and treasurer of the Peck-Hammond Company of Cincinnati, in a letter to the Manufacturers' Record, says: "The writer has just returned from a trip South, and finds that the outlook for business is quite good, especially in the mineral districts. Our past year's business was the largest in our existence, and we think the prospects for this year are equally as good as they were last."

A meeting will be held at Atlanta on February 17 of representatives of the boards of trade, commercial organizations, municipalities and railroads of the State for the purpose of organizing the Greater Georgia Association. This body is expected to give an impetus to the advancement of all the material interests of the State.

SOUTHERN PINE-PRODUCT FACTORIES.

By THOS. W. PRITCHARD.

[Written for the Manufacturers' Record.]

Comparatively few people realize the possibilities that present themselves in the direction of pine-product factories, and fewer still have any idea of the diversified line of products produced at these plants.

The first plant of which the writer has any knowledge was built in 1872 at Wilmington, N. C., by James Stanley. This plant, however, was not a success, and in 1878 it was bought by the present owners of the Spiritine Chemical Co. In 1881 a plant was started by these people near Charleston, S. C., but was soon abandoned.

The first plants were very crude affairs, and were modeled after similar plants built in Germany. No efforts were made to refine the oils, their use being confined to wood-preserving purposes. In the meantime, several other plants were erected and the business began to assume a firmer footing. Gradually the utilization of the products assumed a wider scope, until now the different commercial articles made from the pine waste in the South can be counted by the dozens.

Then, too, the pine needles are being utilized by the Consolidated American Pine Fiber Co. of Cronly, N. C. The green needles are treated by chemical and mechanical means and made into a substitute for horsehair for mattresses and such uses. This is the only plant of its kind in the world, and it is unable to supply the demand for the finished fiber.

More recently still, the Palmetto Company of Philadelphia has perfected machinery so to shred the fibers of the scrub palmetto (hitherto without value) that a perfect substitute for horsehair is the result. The factory doing this was formerly the plant of the Imperial Pine Product Co., located at Wilmington, N. C., and the distillation of fat lightwood is still to be carried on there.

There is also in Wilmington the plant of the American Wood Specialty Co. of New York, whose business is the sawing of fat lightwood into blocks of a peculiar pattern for export. These blocks are used for kindling, and the present capacity of the plant is two carloads per day.

The Spiritine Chemical Co. of Wilmington, N. C., was unquestionably the first to develop the distillation business. This company has two plants in operation—one at Malmo, N. C., and the other at Wilmington. The two most important articles made by this company are the very well-known Spiritine wood preserver and pine rubber paint. This latter has proven so perfect a substitute for linseed-oil paints for such work as freight cars, sheds and all roof work, as well as for roofs, that it has been adopted by one of the leading railroads. The Spiritine Company also makes a substitute for turpentine, oil of tar, a disinfectant, a deck varnish, pyroligneous acid, and its Spiritine balsam, a medicinal article of established value.

About seventy-five miles above Wilmington, at Fayetteville, on the Cape Fear river, is a plant now operated by the Georgia Pine Turpentine Co. of New York, which has also another large plant in operation at Fargo, Ga., and makes a specialty of turpentine. By certain process in the distilling the turpentine is taken from the fat wood in as pure a state as it can be made in the old-fashioned way. There is a ready demand for this at the market price of turpentine. This company also makes a line of by-products, such as soda creosote, acetate

of lime, iron liquor, used for dyeing purposes, oil of tar and other minor lines.

Ten miles from Fayetteville is the plant of the Australis Manufacturing Co., which has a patented process for the manufacture of turpentine direct from the wood. The distilling not being carried far enough to char the wood, it is sawed into suitable shape and sold for paving purposes. The manufacturer claims longer wear for these blocks, as all the water is taken out and the creosote and heavy oils left in.

At Summerville, S. C., is the plant of the Fernoline Company, maker of Fernoline wood preservatives. Further south we have the other plant of the Georgia Pine Turpentine Co., located at Fargo, and making the same product as the plant in Fayetteville.

The writer knows of no other plant between there and Mobile, Ala. At this latter place is the plant of the Southern Oil & Chemical Co. This is a large and well-equipped plant, and the manufacture of turpentine is the principal purpose. It, however, makes a fine line of antiseptics and disinfectants, as well as oil of tar, acetate of lime, pyroligneous acid, creosote oil, etc.

In New Orleans, La., is the plant of the Gilmer Distilling Co. These people make about the same line as the Southern Oil & Chemical Co., and sell the major part of their product in a crude state.

There are possibly other plants in operation of which the writer knows nothing. There is also a large plant to be built at New Orleans, another at Scranton, Miss., one at Aberdeen, N. C., and one or two others projected elsewhere. There is no question but that it is only a question of time when the supply of pine timber will play out, and in making this statement the writer but quotes the opinion of one of the best-informed lumber men in the South, who told him only a few weeks ago that at the present rate of cutting the lands would not last ten years. This means that some other way of producing turpentine must be employed, and direct distillation is the only practical one.

The writer some time ago gave a description of the process of distillation as used in getting the oils and other products from the fat wood, but as it is in order here, I will give a brief description of the process as used by most of the plants mentioned above, though each one claims distinct advantages in especial arrangements; still the principle is the same in all cases:

The fat pine wood is put into retorts that have doors and can be hermetically sealed, and from the retorts a pipe carries the vapors that are generated to a condensing apparatus similar to that used in making turpentine—in other words, a worm. The retorts are set in a furnace very much as the boiler is, and when the fire is started beneath the heat drives the contents of the wood out and leaves it as charcoal. The oils, vaporized by the heat, pass out through the pipe, and, as they strike the worm, which is immersed in cold water, they are condensed into crude oil. This is redistilled and undergoes certain chemical treatment, and is then subdivided into the different products as the manufacturer chooses.

This is in a general way the process followed. In no other business does the writer think there is such a future, and if a plant is built and operated on business principles, with a definite line of manufacture, there is assuredly much money to be

made. The trouble has been that most of the plants that have been built have been built on an experimental basis, and the idea has been to develop the products rather than to market them. If a plant is operated on business lines and sufficient money is allowed to market the goods, the margin of profit is large and success may be assured. It is only a question of

time when other uses will be made of the products—uses now not dreamed of.

The business may be said to be in an embryo state, and the next few years will show marked developments along this line.

The amount of crude material is unlimited and the market is gradually being extended.

SOUTHERN EXHIBITS AT ST. LOUIS.

[Special Correspondence Manufacturers' Record.]

St. Louis, Mo., February 10.

The Southern States will be better and more generally represented at the St. Louis World's Fair than they have been at any previous exposition. By the term Southern States I refer not only to the States south of Mason and Dixon's line, but to all of the States south of the Ohio river and a line extending due west to the Pacific coast, say from Cairo, Ill., and including, beside the South, the four Territories and that part of California south of the Tehachapi range.

If the Alabama legislature, which is now in session, passes an appropriation bill, as it probably will, every State skirting the extreme southern border of the United States from the Atlantic to the Pacific will have made provision for its participation in the exposition, except Florida, whose legislature does not meet until April.

The States and Territories in this area that have taken official action in their order are California, Arizona, New Mexico, Texas, Louisiana, Mississippi, Alabama, Georgia and South Carolina. The counties of Southern California have raised this year about \$100,000 by special tax levies made under the direction of the boards of supervisors according to law. Arizona has an appropriation of \$30,000, New Mexico has \$20,000, Texas is raising \$300,000 by popular subscription through the medium of its World's Fair commission appointed by former Governor Sayers, Louisiana has an appropriation of \$100,000, Mississippi \$50,000, and Georgia and South Carolina have made special arrangements for their exhibits.

It is thought the California counties will double this amount next year. In New Mexico Governor Otero has recommended an increase of \$10,000 in the appropriation, and Texas may be able to supplement her popular subscription by legislative enactment this winter in spite of the supposed constitutional inhibition. If this can be done, the cost of the Texas exhibit will be in the neighborhood of \$500,000, and the historic Alamo will be reproduced as her State building.

The Mississippi legislature last winter did not hesitate to set aside \$50,000 for an exhibit of the State's resources at St. Louis, and to this a considerable sum is being added by private subscription.

Alabama, Georgia, Mississippi, North Carolina, South Carolina and Tennessee had no State buildings at Chicago. All of these States will have splendid exhibits of their resources at St. Louis, and Florida, the only one about which there seems to be any uncertainty, is reasonably sure to be represented. The general assembly of Virginia has passed an appropriation bill for \$50,000 and providing for the appointment of a commission, and now the patriotic people of the State are engaged in a movement to raise an additional \$50,000 by popular subscription.

The reasons why the South should be well represented are apparent. They are both sentimental and material. Of the sentimental side of the question history treats fully. The material side is important. The South wants capital and im-

migration. The field is not yet covered, and every new industry established and every farmer settling within those States will bring new ideas, new capital and a reduction of taxation. Men of means are constantly seeking and spying for the best opportunities, for the fields of fairest promise, to meet inexhaustible resources. They are ever scanning the horizon for indications of such regions, and direct their course accordingly. An exposition is an object-lesson which presents in a most attractive way all the resources and possibilities of a country, material and otherwise, and in every instance it has proved itself the most successful power in bringing in wealth, increased population and new ideas.

At the exposition, as well as men of means, there will come from the Old World the representatives of the mechanic and the homeseeker—they, too, spying out the section of the New World that offers the fairest fields for settlement. Not only will these seekers come from the Old World; there are many in the Northwest seeking more congenial climes, where they are not weather-bound for months. The Southern Pacific Railroad has hundreds of agents employed throughout the West, who in 1902 colonized over 10,000 settlers from the Northwest on the line of that road. The same thing can be done in every Southern State with less effort if their resources are properly displayed at the St. Louis Exposition next year, for the reason that the tide of immigration is already turning southward. CHARLES M. REEVES,

Secretary Committee on State and Territorial Exhibits.

IN THE BIRMINGHAM DISTRICT.

Furnacemen in the Best of Shape as to Prices.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., February 9.

Not any great amount of sales are being made at this time, but the ironmaking interests of the district are not worrying. They are all comfortably cared for up to the first of July, and have found so far no difficulty in disposing of small lots that are to be had from time to time of special grades at a good advance on the minimum price. This is the strength of the situation so far as a man on the outside can see, and leaves the furnacemen in the best of shape to combat any disposition to lower the prices. The fact is that sellers and makers in this territory are not anticipating any general decline, and are working along with the idea that iron is going to rule at the present figures, or near them, for some months to come.

I have been very much interested in the report heard some days ago, and reported in my letter of week before last, that a certain big furnace company in the district had sold 600 tons of No. 2 for \$18. I asked a gentleman connected with the big company if it was a fact that a lot of No. 2 had been sold for that price. He replied that it had not. On the contrary, he said that just after turning down the offer of this kind his company had received and closed for a large order for a price fully as good as any company had been getting for

it. It was stated that there had been no disposition to sell below the maximum even, for so far as had been seen, no such concessions were necessary under the present conditions.

The meeting of the Southern iron committee in Atlanta tomorrow will have the matter of a higher freight rate up, and it is hoped that it will not make the advance. As it is now, the ironmakers of this section of the country are placed in great disadvantage by the lack of competitive rates to many of the leading markets. A comparison will show that Chicago and Pittsburgh, and even Middlesboro, are better fixed in point of rates than Alabama, and that if a raise is made now it will very likely have a very bad effect on the market.

The fuel situation is brightening some, especially in coke. I find that all the coke one wants may be secured in the district at from \$6 to \$6.25 a ton. If the weather keeps in any kind of shape 300 more ovens will go in in the next three months, which will greatly add to the supply. Ore is being mined in greater quantities and preparations made to get out immense quantities of it. The Tennessee Company is beginning to get its mines in shape now, and in a few weeks will be greatly increasing its ore output; in fact, one of the gentlemen in the office told me a few days ago that lately some record outputs had been reported in several of their mines. The Alabama Consolidated has increased the capacity at its mines near Gadsden in anticipation of the new furnace at Gadsden going into blast. This has been delayed, and as a consequence the company has a great deal of ore to sell; in fact, it is heard that in many cases it is very profitable to sell raw material, as the price is so high it can be disposed of at a greater profit really than in iron.

The rolling mills are not doing a great deal. It is said that where the mills are owned by companies operating furnaces the iron is sold, instead of sending it to the rolls. This is said to be the case among local plants. It is expected that bar iron will go up in a few days, however.

It is heard that foreign steel is making some trouble for domestic product. I am told that in one or two instances prices made on good round lots have been turned down because of ability to get as good an article from the foreign field. As this information is not from anyone in authority, it is not given as of very much worth, only serving to indicate that every class of iron product industry is feeling the fear of that foreign influx.

President A. W. Thompson and party of the Republic Iron & Steel Co. has been in the district for a couple of days. Mr. Thompson said they had found the properties of the company in good shape, and all were pleased with conditions as they now exist. When asked what the company expected to do about a steel plant, Mr. Thompson replied that that could wait. He said his people were fully aware that the district was coming, and they had great confidence in it; also that the steel mill would come along some time later.

The report that the Woodward Company is to go ahead pretty quick on a new furnace at Woodward is again current. A telephone message from the furnace elicits the information that there is nothing new in the situation there.

J. H. Hill has opened mines on the Southern four miles from the city, on the property owned by the Virginia Coal Co. The output will be fifty tons a day at the beginning, with twenty-five men for a starter.

The organization of the Upper Cahaba Coal Co. by H. L. Badham, J. L. Dillon and David Roberts, with a capital of \$50,-

000, is supposed to presage extensive operations in the way of mining coal and making coke.

No. 2 furnace of the Sheffield Coal & Iron Co. at Sheffield is ready for the torch, and is expected to produce 250 tons a day. The plant has been made a modern ironmaker in every way, being now one of the finest furnaces in the South.

The organization of the Sheffield Company is expected to result in great good for Sheffield. The capital stock is \$425,000, held by Geo. Parsons of New York and his brother, Charles Parsons of the same city; Messrs. Godby, Strong and Mortimer, and J. C. Mayben of the Sloss-Sheffield Steel & Iron Co., and A. B. Andrews, vice-president of the Southern Railway. The company will acquire and construct water-works and street railway and lighting franchises.

The Alabama Steel & Wire Co. is making a record in the building of its furnace at Gadsden. The tenth ring of the stack on the first floor is on, and the work is proceeding at a remarkable rate. Four of the nine batteries of boilers are up, and one of the four stoves doing well.

Interests identical with the Chattanooga Southern Railroad have begun mining coal on Lookout mountain, twelve miles from Gadsden. The coal is especially adapted for coke.

At a meeting of the stockholders of the Birmingham Railway, Light & Power Co., held last week, it was decided to continue the policy of advancement carried on the past year, when more than a million and one-half dollars were spent in improvements. The work will be kept up until every street-car line in the city and suburbs is equipped with heavy rail, slag ballast, modern crossings and the best that can be secured in cars.

Machinery is being placed for Model Ice Co. at Anniston. J. G. Farley, Lowrey Mallory and Eba Scarbrough are the owners. The capacity will be thirty tons a day.

At a recent meeting of the stockholders of the Opelika Cotton Mills at Opelika it was unanimously decided to increase the capital stock from \$100,000 to \$150,000. The money from the sale of the new stock will be used to add a new building and much new equipment. C. C. Torbert was re-elected president, and M. M. McCall, secretary and treasurer. H. W. L.

BRUNSWICK'S STEEL PLANT.

Statement of Engineers as to Furnaces and Steel Works.

[Special Dispatch to Manufacturers' Record.] Brunswick, Ga., February 10.

Mr. J. O. Cromwell of the Garrett-Cromwell Engineering Co., Cleveland, Ohio, which has contract to erect a 1600-ton iron and steel works and rolling mill here, the plant to include five 500-ton furnaces, for the Mohawk Valley Steel & Wire Co., has been here for two days, accompanied by their expert, Mr. Lash. He states: "In compliance with our contract, I have examined and tested the locations offered by the city of Brunswick for the erection of the plant, and have passed my opinion upon the practicability and necessity of utilizing the 400-acre tract known as the oyster-canning property, which is situated upon high mainland. The creek flowing by will have to be straightened and deepened, which will make the site an ideal one. Our contract covers all the work, from surveying to the erection of the immense furnaces, rolling mills and all machinery. Actual work will begin as soon as authorized by President Frank A. Umsted." President Umsted said: "The Garrett-Cromwell Engineering Co. has all contracts for the entire plant. Its report of inspection of the different sites offered is final, which is the

oyster-canning factory location, embracing nearly 500 acres. I expect the city to furnish my company with the deeds to this property at once, and then work will begin. I leave for New York tonight to close final matters there, but will be back here within a week."

IN CABIN CREEK DISTRICT.

Rapid Development Recently of a West Virginia Coal Field.

[Special Cor. Manufacturers' Record.]

Staunton, Va., February 10.

With all its enterprise and great achievement, the Kanawha coal field of West Virginia can nowhere boast more rapid development than that in the Cabin Creek district.

Cabin creek is but sixteen miles from Charleston, the capital of West Virginia, and is easy of access, but it has remained comparatively unknown to the great commercial interests around it.

Three mining companies, however, long since established themselves there, and have been doing business in a modest way, shipping the product of their mines to the Chesapeake & Ohio Railway over the 14-mile track of the Kanawha road. From the bed of the stream to the crown of the paralleling steeps are five seams of coal, varying in thickness from eight to three and one-half feet, and so easily mined and covering such an area that the supply seems practically inexhaustible. To reach and develop this great field the C. & O. people bought the Kanawha line, agreeing in the deal to make all freight shipments at main-line rates. That was just a year ago, and closely following this transaction the new interests began the work of extension. The line was carried up the left fork of the stream to its headwaters, and up the right fork beyond Acme to Kayford. Then began the rush that brought operators crowding into the district in haste.

From May 1 to the present time twenty-two new operations have been established along the creek. Those who owned coal lands began at once developing them, and those who could not buy leased. As a consequence the price of coal lands advanced rapidly, and in strong hands this advance is now firmly maintained. As an instance of the advance, I have in mind a company that leased a part of its tract, the cash premium over the royalty in which was sufficient to have purchased the land a year ago, but when one sees the work being done and to be done the price seems more than justified.

Twenty-five operations are now in this field, every one of which is actively pushing the development of its property. Of these, twelve are already shipping coal, four of them being especially strong corporations, backed by large capital and controlling powerful interests. Besides the opening of numerous mines, a great deal of construction work is in progress. Small mining towns are rapidly springing into existence at several of the camps scattered from the mouth of the creek to its headwaters. In some localities the course of development has been so rapid that the towns run into one another in a way quite bewildering to the stranger.

The communities of Acme and Kayford present a striking instance of this. At present the latter place is the terminus of the railroad and the home of four companies, whose allied interests are to a certain extent co operative. They purpose to use the same shops, the same commissary, the same stables, and will otherwise constitute a single community. Since June 1 last some eighty buildings have been erected there, with the further promise of enough more to raise the sum total to 500. These will be sufficient, it is estimated, to house 800 workmen, who, with

their families, will constitute a very considerable population. The companies fell their own timber, run their own saw-mill and employ their own force of carpenters. Nor are the houses thus hastily constructed a shabby or insufficient lot. On the contrary, they are for the most part well built and weatherproof. Against stout weather-boarding is placed a course of heavy builders' paper, and over this an inside ceiling of hard pine. The houses contain from four to six rooms and a kitchen, and are supplied with water piped from a reservoir tank. With advanced wages, good feeding and warm housing, the miners' lot in this section should be a contented one.

Although the industrial activity in this field has been phenomenal, it is nevertheless conceded that the zenith of its prosperity has not as yet been reached. When the spring opens with better weather other operators are confidently expected, and the dozens of those already in the field will redouble their efforts. If, under the adverse conditions of a rigorous winter, the development has been so pronounced, what may not be expected with the return of good weather and longer days. At this time there are nearly a hundred earloads of coal shipped daily from the creek, equal in freight to the make-up of three heavily laden trains. The passenger traffic, too, as may be judged, has greatly increased, now justifying the run of four trains, two each way, per day, and all are well patronized. In answer to a question, one of the largest operators in this field declared: "If ample transportation facilities are given us, I predict that within the next year the creek will produce an output of 15,000 tons per day—a shipment equal to 375 earloads, or over twelve trains of thirty cars each." And this optimistic feeling I find is general not only among the local operators, but is shared generally by the people of Charleston, who declare that Cabin creek will be to the Kanawha field what Loup creek is to the New River field.

The C. & O. is making every effort to meet the demands of this expanding trade. At Leewood, the converging point of the branch lines, is to be built a switching yard, while just west of Coalburg, where the creek road taps the main line, another and more extensive yard is to be built with miles of track. Not content with developing this territory, the C. & O. is pushing its tracks through the mountain to Coal River valley, in Boone and Raleigh counties, which lie to the southwest of Cabin creek. Much of the grading on this extension has already been done, beginning at a point between Ronda and Leewood and building up to the crown of the mountain. Here a tunnel three-quarters of a mile long is being driven, a strong force working at either end. From the west portal the road will follow down the bank of Seng creek to Coal river; thence up Coal river to Lawson, an obscure post-office located at the mouth of Sycamore creek in Raleigh county. This is to be the terminus of the road, and at which a thrifty village may be expected to rise.

The course thus wisely taken by the railway leads through a country rich in coal deposits similar in quality and having the same levels as the mines on Cabin creek, which, with the tunnel connection, will practically make the two fields one. Besides developing new coal lands, the road up Coal river will be in easy proximity to vast quantities of timber as yet untouched by the woodsman's axe. These forests lie principally in Raleigh county, wherein are found white oak, chestnut oak and poplar in great quantities, interspersed here and there with hemlock.

Another railroad, however, is keeping watchful eye on this territory, and seems

inclined to dispute the C. & O.'s monopoly of it. This is the Pocahontas, Coal River & Kanawha Company, which has for some time been building up the valley of the Coal from St. Albans, twelve miles west of Charleston. Should this road continue up the river to a junction with the C. & O., there would be ample facilities for developing one of the largest and richest coal and lumber districts in the State. But can the roads of the country do more business than is already offered them? is a question not infrequently asked, but is answered in the large rush orders for new and improved equipment constantly being sent to the car factories and locomotive works. That the C. & O. is handling a greater tonnage than ever before in the history of the road is apparent to even a casual observer. From Clifton Forge west the congestion and crowding of freight matter is most striking. At that place a few days since I counted no less than fourteen tracks of loaded cars on the yards run in as close as could be placed, while further west the same conditions obtain to more or less extent. The gorge of business is therefore general throughout the more industrial districts along the system. Not long since, in the coal districts, the situation had become so serious as to justify a special trip of inspection by the officers of the road, since which time, under vigorous special orders, the blockade is being straightened out.

From Quinimont, in Fayette county, to Charleston, a distance of some seventy-five miles, lie the great coal fields of the New River and Kanawha districts—geographically so near to each other, yet geologically so different—the one a soft product, the other for the most part splint. Generally speaking, these coal seams in undulations dip toward the northwest at an easy grade and slope locally with the streams. Thus it is that the New River seams disappear beneath the river near Hawk's Nest, while twelve miles further west the levels of the Kanawha come in, a semi-barren belt between the point where the one disappears and the other begins. Following the Kanawha from Mt. Carbon Station, one can easily trace the rich cropping of coal veins along the sides of the mountain, where it lies near the steep surface, and also in the beds of small streams. Though most of the product in this field is a splint (becoming harder as the seams tend to the west), there is nevertheless a thick stratum of the best soft coal here, locally known as No. 2 gas coal, similar in analysis to the Lower Kittanning, a Pennsylvania coal of reputation. Much of this grade coal is being mined along the Kanawha on both its banks, while on Cabin creek it represents the entire present output.

Traveling as an impressionist, a trip through these industrial districts is most interesting. From Quinimont west to Charleston is passed in rapid review hives of industry and achievement. Established operations are making improvements and extensions, new enterprises are everywhere being started, and thousands of tenant houses for the miners have been erected or are in course of construction. For long distances I could count three, four and sometimes six coal operations within a mile, many of them with hundreds of coke ovens in blast. From Thurmond to Kanawha Falls there are paralleling lines of railway on both sides of New river, thus bringing into rapid development the entire resources of this section. At night a trip between these points is most picturesque. All along the way the glare from many thousand coke ovens is painted on the sky, while every tongue of flame is seen in double reflection on each side of the river.

ARTHUR S. MORTON.

SOUTHERN TOPOGRAPHIC MAPS.

The United States Geological Survey has been engaged since its organization in making a topographic survey and map and in the preparation of a geologic map of the United States. Under the plan adopted the unit of survey is a quadrangle 15', 30' or 1° in extent each way, covering an area of one-sixteenth, one-fourth or one "square degree." The unit of publication is an atlas sheet 16½ inches wide by 20 inches high, and each sheet is a topographic map of one of the above areas. As the atlas sheets are uniform in size, the greater the area covered the smaller the scale of the map. The scale of the full-degree sheet is 1:250,000; that of the 30' sheet is 1:125,000, and that of the 15' sheet is 1:62,500. The sheet is designated by the name of some well-known place or feature appearing on it, and the names of adjoining published sheets are printed on the margin. The maps are engraved on copper and printed from stone in three colors. The cultural features, such as roads, railroads, cities, towns, etc., as well as all lettering, are in black, all water features are printed in blue, and the hill features are shown by brown contour lines. The contour interval varies with the scale of the map and the relief of the country. Maps of limited areas economically important are sometimes published which are not in conformity with the general scheme outlined above. These are called special maps.

In North Carolina, Alabama and Kentucky the topographic work is being carried on by the Geological Survey in co-operation with the respective States, and North Carolina and Kentucky are also co-operating in the geologic work. Each of the rectangles outlined on the index map shows the location and area of a quadrangle of which a topographic survey has been made. The name of the resulting atlas sheet, when published, is also shown, and its scale is indicated by the size of the rectangle; thus the larger rectangles indicate the smaller-scale sheets, and the smaller rectangles indicate the larger-scale sheets. Each of the atlas sheets represented by the larger rectangles shows a quadrangle 30' in extent each way (one-fourth of a "square degree"), or from 932 to 1030 square miles, the area varying with the latitude; the scale is 1:125,000, or about two miles to one inch, and the contour interval is from 50 to 100 feet except on the Norfolk quadrangle, where it is five feet. The whole number of topographic sheets published is: North Carolina, 27; South Carolina, 9; Georgia, 18; Alabama, 17; Tennessee, 34, and Kentucky, 21.

Geologic maps corresponding in position, area and name with the topographic maps are being published in the form of folios. The areal geology, underground structure and mineral deposits are represented by colors and patterns. Each folio contains topographic, geologic, economic and structural maps of the quadrangle, and occasionally other illustrations, together with a general description. The following folios—to be applied for by name and annexed number—have been issued: Ringgold, 2; Sewanee, 8; Estillville, 12; Knoxville, 16; Stevenson, 19; Cleveland, 20; Pikeville, 21; McMinnville, 22; Loudon, 25; Morristown, 27; Briceville, 33; Gadsden, 35; Wartburg, 40; Richmond, 46; London, 47; Standingstone, 53; Bristol, 59; Maynardville, 75; Rome, 78; Norfolk, 80, and Cranberry, in preparation.

Under the existing law the maps and folios are disposed of by sale at practically the cost of paper and printing. Index maps of the topographic work in different sections of the country and a general circular on geologic folios may be had upon application to the director of the United States Geological Survey, Washington,

D. C., who will gladly give further information on the subject.

The topographic maps are sold at the rate of five cents a sheet of standard size; or, for 100 or more in one order, whether of the same sheet or of different sheets, the price is two cents a sheet for the standard size. When maps ordered are not in stock the right is reserved by the Survey to substitute other sheets rather than return very small amounts of money by mail, unless directions to the contrary are given in the order. The usual price of the geologic folios is twenty-five cents each. The name of the county should be included in the postoffice address. Prepayment is required, and may be made by money order payable to the order of the director of the United States Geological Survey, or in cash—the exact amount. Checks and postage stamps cannot be accepted.

The readers of this journal do not need any discussion of the value to the civil engineer, the mining engineer, the railroad contractor and the prospector of these maps and folios. They have already saved to individuals and to corporations thousands of dollars that must otherwise have been expended.

PROGRESS AT NORFOLK.

Industrial Dreams of the Past Becoming Realities.

Through the courtesy of Mr. E. E. Dawes, secretary of the Board of Trade and Business Men's Association of Norfolk, Va., Mr. Walter Sharp is enabled to present some facts about the progress of Norfolk. In a letter to the Manufacturers' Record Mr. Sharp says:

"These statements are made up from actual data collected by Mr. Dawes, to be embodied in a pamphlet to be shortly issued. I am impelled to publish some of this interesting matter in advance of that issue, since business men, particularly manufacturers, are almost daily making investigations, while many are investing their money in large sums. It really seems that what was a dream in days gone by has become a reality, and this port is fast becoming a manufacturing center, as the story I will tell shows for itself. Surely if there was any basis for confidence in the future of this community in 1880 and 1890, there is ample in the day to satisfy the most careful investor. Sites for new plants are in active demand, and notwithstanding our miles of shores on the various branches of the Elizabeth river, water-fronts are rapidly being utilized and becoming more and more valuable."

Comparing census figures of 1890 and 1900, Mr. Sharp shows that the number of factories in Norfolk has increased in ten years from 374 to 445, the capital from \$3,417,454 to \$6,425,099, employees from 2391 to 4334, wages paid from \$1,016,390 to \$1,571,229, and the value of the products from \$5,100,408 to \$9,397,355. The increase of the last two years cannot be definitely stated, but figures available show that in 1902 thirty-eight factories in Norfolk had a capital of \$2,753,500, with 2168 employees and an output of \$4,661,000; thirteen factories in Portsmouth had a capital of \$1,574,000, with 1583 employees and an output of \$2,578,000, and sixteen factories in Berkeley had a capital of \$4,350,500, with 3367 employees and an output of \$5,847,000. This, of course, is but a fractional part of the total number of factories in operation, and Mr. Sharp says that new enterprises now in course of construction will make the showing still better, while the Hampton Roads Shipbuilding Co.'s plant, work on which has just begun, and the American Tobacco Co.'s plant, nearly completed, will give work to 6000 persons.

Reviewing the progress of street-car-line construction, Mr. Sharp traces the growth of the system now operated by the Norfolk, Portsmouth & Newport News Company, which has a total trackage of 109 miles, with 161 cars and 800 employees, and paying out \$312,000 a year. The Chesapeake Transit Co. has a road twenty-six miles long to Cape Henry and Virginia Beach, and the Virginia Beach steam road has extended its double track of eighteen and one-half miles from Virginia Beach to Cape Henry, seven miles.

The banks show an increase between January 1, 1901, and January 1, 1903, in capital from \$1,365,000 to \$1,882,500, in surplus from \$1,083,321 to \$1,434,597, in deposits from \$7,493,652 to \$8,650,883, and in loans from \$6,511,670 to \$8,292,762. The Virginia-Carolina Trust Co., with a capital of \$250,000, began business on January 1.

The assessed value of real estate increased during 1902 by \$2,115,000 to a total of \$28,477,320 as a result of new buildings, and there is now under contract, or to be contracted for the spring, work on new buildings representing not less than \$2,000,000. Within the last three years the city has spent \$500,000 on new public schoolhouses, streets, sewerage, water mains, etc.

BIG LUMBER DEAL.

St. Louis & San Francisco Railroad Reported Interested in the Kirby Company.

Advices from St. Louis report that President B. F. Yoakum of the St. Louis & San Francisco Railroad, James Campbell and H. C. Pierce, who are associated with him in that company, have bought from John H. Kirby an interest in the Kirby Lumber Co., probably the greatest lumber corporation in the world, controlling over 1,000,000 acres of land.

The Kirby Lumber Co. owns large tracts of yellow-pine timber land in the eastern part of Texas, and the deal, it is reported, is preliminary to building an extension of the St. Louis & San Francisco Railroad from Paris, Texas, through the timber region, one line going to Houston and another to the Gulf at Sabine Pass.

It is further reported that the Kirby Lumber Co.'s annual output amounts to 800,000 tons of freight, which will be turned over to the Frisco system.

A Big Steamship.

The steamship Maine, built by the Maryland Steel Co. at Sparrow's Point, Md., for the Atlantic Transport Line, has been launched. The Maine is one of the largest vessels ever built by the Maryland Steel Co. She has a capacity of 11,000 tons of cargo and 750 head of cattle. Her length over all is 507 feet, and her beam 58 feet.

Exports from Galveston, Texas, in January were valued at \$9,304,678.

Wise Men

read the advertising pages of the Manufacturers' Record carefully because they are always sure to find something of value; it may be a special sale, or an opportunity for investment, or some new machinery, or some one looking for a location for a factory, or a thousand and one things advertised that may concern you. Every man ought to study newspapers, not simply glance over them, but examine in detail the Manufacturers' Record, for instance, and he will be sure to find something that can be made profitable in his business. In its news columns and in its advertising pages he will find matter that may prove invaluable in his business operations.

BRIQUETTING FLUE DUST.**The Possibilities in the Process for the Iron Industry.**

At a recent meeting of the Engineers' Society of Western Pennsylvania Mr. Henry S. Mould presented an interesting paper on the history, the value and possibilities of briquetting in the iron industry, which is published in full in the proceedings of the society. In introduction Mr. Mould said:

"Whenever blast-furnace managers are asked about briquetting there is a tendency to smile and edge away. It is the old story of a distaste to take any radical step in the direction of change from established customs until someone else has proven the proposition, and with it the necessity to act in order to keep up with the times. If no one takes the initiative, no progress is made.

"But if you bring up the subject of the loss resulting from flue-dust waste and the evils resulting from the use of large quantities of fine ore in the furnace, there will not be found such a willingness to smile. If the furnace manager is honest, he will acknowledge that the scarcity of lump ore and its value in comparison with Mesaba, and the consequent necessity of using the fine material in the furnace in large quantities, increases the flue-dust loss and gives rise to other dangers and evils that entail, oftentimes, heavy property loss, and even the loss of human life.

"It is to do away with these evils as far as possible that the subject of briquetting has been invested by myself for the last eight years. There have been many failures, with sometimes little prospect of ultimate success. As time has slipped away, the field where briquetting, if done successfully, would prove an important economic factor has opened out to vastly larger dimensions than it had eight years ago. Already the great precious-metal ore smelters of the country are using briquetting machines to force their flue dust and fine ores into blocks. But the iron men have been more skeptical. The opportunities for demonstrating that the work can be successfully done in this field have been more difficult to obtain. But the time has come at last when a practical demonstration is about to be made, and I am confident that the test will prove that the years of experiment were not wasted."

Mr. Mould traced the development of the fuel-briquetting industry, described different machines invented to briquette flue dust and fine ores, and, as indicating the economic value of a successful process, said:

"After telling you some of the difficulties that have been encountered in solving this problem, it is well that you should know wherein lies the value of the process in the iron and steel industry. All of you know that flue dust exists and that large quantities of it are lost to the furnace owners. All of you have probably seen that fact practically demonstrated in Pittsburg to your annoyance.

"Now for a few figures: In a blast furnace producing 600 tons of iron per day the furnace burden approximates 540 tons of coke, 375 tons of limestone and 1085 tons of ore—a total of approximately 2000 tons. Assuming that the furnace managers use 80 per cent. of Mesaba ore, or 868 tons, and lose 8 per cent. of the Mesaba burden in flue dust (and these are under the actual figures if anything), what does this mean in dollars and cents? It means that every twenty-four hours the furnace owners are absolutely throwing away seventy tons of ore. Estimating the value of Mesaba ore in Pittsburg at \$3.50 a ton, this means that the loss in flue dust alone is \$245 a day, or \$89,425 per year. But this is not the only loss

occasioned by the flue dust. As the dust is carried through the stoves by the blast it acts on their walls and on the boiler flues much as a sand-blast does, causing damage and wear. The heavy charge of fine ore in the furnace often causes clogging and slips, oftentimes resulting in explosions and heavy property damage, and sometimes in loss of life. The amount of loss sustained in this way cannot be estimated in dollars and cents even approximately. In addition, there is the damage to adjacent property owners and the annoyance resulting therefrom.

"By the briquetting of the flue dust and the consequent reduction of the percentage of fine material used in the furnace, it could be saved to the furnace owners. Mind, I am not claiming that the briquetting of the flue dust would eliminate all of the troubles with which the blast-furnace manager has to contend at present, but that they might be materially lessened.

"And this is not all. There are even greater things that can be accomplished by briquetting. In 1901, using the figures and tables compiled by the Iron Trade Review, the total shipment of ore from the Lake Superior region was 20,589,237 tons. Of this amount, the Mesaba range contributed 9,004,890 tons, or about 44 per cent. The amount of the total Lake Superior shipments that came to Lake Erie ports in that year was 17,014,076 tons. Of this amount, Buffalo and Erie, which are the receiving ports for ores shipped to the East, received 2,854,763 tons. The rest went to Ohio, West Virginia and Western Pennsylvania furnaces. At a rough approximation, the Pittsburg district, including the Mahoning and Shenango valleys and Wheeling, received about 11,000,000 tons, and it is fair to assume that the total of Mesaba ores used in this district bears the same relation to the total of all ores used that the Mesaba output bears to the total of the Lake Superior output—namely, 44 per cent., or 4,840,000 tons.

"Exact and exhaustive analyses of all ore cargoes shipped from the Mesaba range show that the ores carry a heavy percentage of moisture. In 1901, from a tabulated list of these analyses compiled by the ore agents of the big steel companies, the lowest percentage of moisture shown in the Mesaba shipments was in ore from the Franklin mine, and it showed 7.457 per cent. The highest percentage was in ore from the Dailey mine, and amounted to 15.59 per cent., and the average amount of moisture in the Mesaba output from fifty-two mines for the year was 10.57 per cent. In other words, the manufacturers of iron and steel in the Pittsburg district are hauling from Lake Superior and paying freight on 511,580 tons of water. The freight rate from the Mesaba range to Pittsburg is \$2.35 a ton. On this basis Pittsburg manufacturers are paying \$1,202,231 a year for hauling water from the mines.

"With the use of briquetting machinery this waste in freight alone can be saved to the manufacturers, in addition to the elimination of the other evils of which I have spoken. It is quite possible to briquette the fine ores at the mine. After first drying the material and driving off the moisture, then pressing the fine ore into blocks, the raw material can be brought direct to the furnaces in this district as lump ore in bricks that are waterproof and that are abundantly able to withstand the rough usage essential in transportation. By this means all of the evils that must now be contended with arising from the use of fine ores can be absolutely done away with.

"In this paper I have been able to give only a rough outline of this seemingly

simple, but really complex, question. I have said nothing of the immense field for briquetting offered by the coke braize, culm, slack, iron sands and a host of other materials that we have experimented with, in addition to iron flue dust and fine iron ores. Suffice it to say that we have solved the problem, and that the means are now at hand for the iron and steel manufacturers of this district to do away with a large number of evils with which they are now contending."

In reply to different questions during the discussion of his paper, Mr. Mould said:

"With reference to the moisture in the ore, I am not sufficiently familiar with actual blast-furnace practice to make any statement as to what essential benefit there would be in feeding furnaces with dry ore rather than with ore containing a certain amount of water. Naturally, that moisture in the ore is evaporated at the top of the furnace, but whether there is a sufficient quantity of gases to do that work at practically no expense, or whether there would be a benefit by having such gas put to some useful purpose if it was not used in evaporating the water from the ore, I am unable to say. The only point I make with reference to separating the water from the ore is this—that if it is not needed or wanted for any purpose, and if there is an average of 10 per cent. of moisture in the fine ores which could be eliminated before hauling, it certainly would save a large item in freight. I believe there is a movement on foot at the present time with reference to drying Mesaba ores, that is, taking out such moisture as can be taken out, and yet not have it so dusty that any great quantity will blow away. Some years ago there was some experimenting done by the Carnegie Steel Co. at Conneaut in drying ores by taking all the moisture out, but there was so much loss by blowing away of the dry ore that the scheme was given up. Now, my claim is that the process of briquetting will be so perfected and so cheapened that, taking the benefits which come by reason of using lump instead of fine ores, these benefits will more than compensate for the cost of briquetting, and in that way show a profit in the operation.

"With reference to the binder, the almost general practice in this connection, so far as the smelter people are concerned, is the use of simply lime. We have, however, plants in operation in which molasses waste is the base, and in others dextrine is used as a base. For fuel briquetting the general binder used in foreign countries is coal-tar pitch. We have used coal-tar pitch, and also petroleum and molasses waste, with other ingredients. The binder part of the question is to a certain extent a secret. There are many formulae for binders which have been patented, but a composition patent is not of much strength, and I do not suppose there is a legitimate business today in connection with which there are so many cranks at work as on the binder proposition. We hear from people all over the world who think they have the only binder. Our testing plant is always open, however, to these people, so that their binders may be tried out, and when the actual test is made the most of them fall far short of the mark."

The Oklahoma Loan & Investment Co. of Kingfisher, Okla., has been incorporated, with \$100,000 capital, by ex-Governor A. J. Seay, A. C. Burwell and J. A. Overstreet.

The Chickasaw Fire Insurance Co. of Ardmore, I. T., has been incorporated, with \$100,000 capital, by W. M. Anderson, C. Peacher and W. J. Newson.

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

Machinery for France.

Paul Roullanger, engineer of arts and manufactures, No. 10 Rue du Four Saint Germain, Paris, France, writes to the Manufacturers' Record:

"I am convinced that a great number of your manufacturers could find in France a good market and ready sale for their products. The difficulty for them to overcome is that of making their products known, and they should lose no opportunity of speaking about their goods. To introduce American products into France a good agent is absolutely necessary, but an agency for such industries can only be well handled by a civil engineer. A civil engineer alone can discuss with authority and conviction the advantages of different machines, engines and kindred products, and place in proper light the inconveniences or weak points of engines and products of competitors. Moreover, a civil engineer graduated from a large college has no difficulty in entering all large factories by means of the companionship or good-fellowship which exists between them and all plant owners, vastly facilitating the conclusions of business transactions. Unfortunately, very few genuine civil engineers work in France in technical agencies, and the greater part of your American manufacturers are sadly lacking in industrial experience in foreign trade. I think I might be able to help your manufacturers in Paris."

Pea-Canning Machinery.

Alfred Craus of Maison Rouge, near Metz, Germany, in a letter to the Manufacturers' Record writes:

"I want machinery, which is used in America, I believe, for the handling and canning of green peas, cooked in the cans. This equipment which I wish is as follows: Pea harvester, a machine which cuts the plants of the green peas, which will later be crushed to be put in the cans; a viner, a machine used to crush peas which stick to the plants after the harvester has finished with them; sorters, machines to separate the peas, the good from the bad; a blancher, a machine for cleaning the peas; a squirrel cage, a machine serving to separate the peas that are too small and those that are broken, and a machine used for placing the crushed peas in the cans. I should be glad to see these machines and to introduce them into our region."

Tobacco Machinery for Egypt.

Roulad Freres of Alexandria, Egypt, in a letter to the Manufacturers' Record expressing a desire for commercial relations with the United States, writes as follows: "You can be of the greatest possible service to us by assisting us to enter into relations with a manufacturer of cutlery, especially knives used for cutting the threads of tobacco. The employment and demand for this article in Egypt is enormous at this time, and, as you doubtless know, the manufacture of cigarettes being one of the greatest industries of this country, we could do well indeed with this article of American manufacture, provided, of course, the price of the same permits us to compete actively with the same thing from the hands of German and Belgian manufacturers."

The Royal Siamese Railway Department has issued specifications for an open tender of 33,806 tons of steel rails and accessories, bids to close on June 15 next.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ELECTRIC LINE IN KENTUCKY.

Plan to Build Railway and Power Plant Between Two Towns.

Concerning the plan to build an electric railroad from Columbia to Campbellsville, Ky., Mr. W. K. Azbill writes to the Manufacturers' Record as follows:

"Casey, Russell and Adair counties reach their markets through Columbia and Campbellsville. For this large territory the nearest railway station is Campbellsville. The distance from Columbia by the turnpike is twenty miles. It is estimated that the hauling to and from and through Adair county during one year amounts to \$90,000. Of course, a large amount of travel goes with this business to and from market. As timber in other parts becomes scarce the need for a railway is the more keenly felt.

"The promotion of an electric line was undertaken by the writer about six months ago. A great horseshoe bend in the Green river at a point midway between the two towns offered a rare opportunity of developing a first-class water-power to operate the road and to furnish both light and power for many miles around. Lands, rights and easements for this purpose were secured, and flood rights were applied for. Then grants of land for the right of way were obtained of the farmers along the route. Next a preliminary survey was made and a profile was prepared. Now amendments are being made and other steps are being taken as fast as the exigencies of such a case will allow.

"It is ascertained that the distance by rail will be only nineteen miles. The cost of the road, with first-class equipment apart from rolling stock, will be about \$130,000. The cost of the water-power development will be about \$120,000. The rolling stock will cost approximately \$50,000; total, \$300,000."

ROCK ISLAND'S DEAL.

Reported Will Use the Houston & Texas Central to the Gulf.

Advices from New York report that the Chicago, Rock Island & Pacific Railway has acquired a half interest in the Houston & Texas Central Railway, and will therefore not be compelled to build its proposed line from Dallas, Texas, to the Gulf of Mexico, about 300 miles. This will give the Rock Island a direct route to the Gulf. The deal was made with the Harriman interests in the Southern Pacific and the Union Pacific.

The Houston & Texas Central consists of the following lines: Houston to Denison, 337 miles; Hempstead via Austin to Llano, 214 miles; Bremond via Waco to Ross, 55 miles; Garrett to Fort Worth, 53 miles; Lampasas branch, 23 miles; Marble Falls branch, 11 miles; Lancaster branch, 5 miles; total, 698 miles.

The Rock Island's line will thus reach a port on the Gulf of Mexico, for the Houston & Texas Central trains reach Galveston by arrangement with the Southern Pacific over the Galveston, Houston & Northern. A dispatch from Dallas says that while the Rock Island will not now build from Dallas to Galveston, it is understood that its deal for a large body of land on Galveston bay near La Porte, to give it access to the Houston ship channel, will be completed.

New Equipment Orders.

Mr. J. T. Harahan, second vice-president of the Illinois Central Railroad, is

reported as saying that the company has just ordered fifty new locomotives, and, that in view of the congestion of freight traffic in the South, the new equipment will probably find its way there as soon as delivered. The order includes thirty freight engines, ten passenger engines and ten switchers. It is further stated that the Illinois Central recently ordered 100 locomotives for delivery this year, but that only eight have been delivered, and the order will not be completed until the first of next year.

The St. Louis & San Francisco Railroad is also reported to be in the market for fifty locomotives, 1000 box cars and 1000 flat cars, to be delivered in 1904.

'FRISCO AT NEW ORLEANS.

Four New Directors Elected at the Company's Annual Meeting.

The St. Louis & San Francisco Railroad ordinance has passed the New Orleans city council, and Mr. L. S. Berg, representing the company, is quoted as saying that the work of constructing an entrance into that city will begin as soon as the ordinance is approved and is effective. The ordinance provides for a belt line, which Mr. Berg says will be constructed in the most modern and substantial manner. The extension from Memphis to New Orleans will be of easy grades.

At the annual meeting of the St. Louis & San Francisco all the old directors were elected excepting J. N. Seligman, Frederick Strauss, George A. Magill and Richard Olney, who were succeeded by H. H. Porter, W. K. Bixby, J. S. Ford and J. T. Fulton. The other members of the board are James A. Blair, James Campbell, E. C. Henderson, H. C. Pierce, B. F. Yoakum, B. P. Cheney, Mark T. Cox, R. C. Kerens and Nathaniel Thayer.

Mr. Porter has for years been prominent in the Chicago & Eastern Illinois Railroad, which was recently purchased by the Frisco, and Mr. Bixby represents his own holdings of Frisco stock. Mr. Ford has represented the Frisco in New York for some time.

Mr. Ramsey's New Duties.

Mr. Joseph Ramsey, Jr., president of the Wabash Railroad, has also been elected president of the Western Maryland Railroad and the West Virginia Central Railroad, which, like the Wabash, are Gould properties. Mr. Ramsey succeeds Mr. Winslow S. Pierce, who is attorney for the Gould lines, and who, when he took the presidency last summer, did so with the understanding that his occupancy of it would be temporary.

President Ramsey, immediately upon assuming his new duties, started upon an inspection trip of the Western Maryland and the West Virginia Central, it being the intention of the company to push work on the proposed connection between Cherry Run, W. Va., and Cumberland, Md., and also on the construction planned by the West Virginia Central to connect with the lines west.

According to official statements, the change in the presidency of the road was made for the purpose of having under one executive head the different properties which are to compose the Gould line eastward to tidewater. Mr. Ramsey says he will continue his headquarters at St. Louis, but will make regular visits to Baltimore. It is expected that Wabash trains will be running into Baltimore within two years.

B. & O. Improvements.

The completion of the Mt. Airy improvement on the old main line of the Baltimore & Ohio Railroad, between the Relay and Washington Junction, Md., is announced, and the line has been put in service. This

work has been in progress for several years, and consisted of cutting down heavy grades and taking out sharp curves. A tunnel half a mile long is part of the improvement at Mt. Airy, which is the highest point of the ridge that had to be crossed. Between Frederick Junction and Washington Junction a detour line was constructed to secure an easier grade.

Other improvements on the main line are between Ijamsville and Reels Mills, including a tunnel 200 feet long. A 450-foot tunnel and some new line is also being built immediately east of Morgan. The Ilchester improvement is likewise being completed, including a double-track tunnel 1400 feet long, and further changes in alignment will be made near Oella, Sykesville and Gaithers.

Between Ilchester and Ellicott City a change of line 5800 feet long has been made, and at Union Dam another curve was reduced, a double-track tunnel 780 feet long being constructed. East of Woodstock another bad curve was reduced by building 1600 feet of line.

Mountain Park Railway.

Mr. R. D. Simpson writes to the Manufacturers' Record from Mountain Park, Oklahoma Territory, saying:

"The Mountain Park Electric Railway Co. proposes to build a line of railroad from Wildman, Okla., through Mountain Park, Okla., to Snyder, Okla., or the crossing of the Blackwell, Enid & Southwestern and the Oklahoma & Western railroads, both Frisco holdings. The length of the line will be about twelve miles; and it is to be operated by steam till such time as the reservoir for the irrigation system here is completed, when it will be converted into an electric line. The country is mountainous, containing many rich valleys and some mines—gold and silver propositions. It is a fine agricultural country as it is, and when the system of irrigation now proposed is carried into effect it will be the finest in the United States."

Special Rate Granted.

The Queen & Crescent Route (Cincinnati, New Orleans & Texas Pacific Railway Co.) has made a special rate for the National Manufacturers' Association, which is to meet at New Orleans, La., April 15 to 17 next. One fare for the round trip (\$21) from Cincinnati will be charged, and tickets will be on sale April 11, 12 and 13, good until April 19. An extension will be granted until April 30 upon the deposit of tickets and the payment of fifty cents each with the special agent of the company at 204 Camp street, New Orleans. Tickets to be extended must be deposited not later than April 19, and must be withdrawn sufficiently early to enable passengers to reach their original starting-point before midnight of April 30. W. C. Rinearson is general passenger agent of the company at Cincinnati, Ohio.

Jackson to the Mississippi.

Secretary T. H. Arnold of the Jackson Commercial Club of Jackson, Tenn., in a letter to the Manufacturers' Record writes as follows:

"The electric line in which I am interested is designed to be constructed from this city to the Mississippi river, reaching that stream at either a point opposite Carthersville, Mo., or opposite Osceola, Ark. The exact route has not yet been determined upon, though preliminary surveys have been made over two routes above named—one going via Bells, Tenn.; Alamo, Crockett Mills, Friendship and Dyersburg, and the other via Brownsville and Ripley, Tenn. The length of the line either way will be about sixty five miles,

and it will run through one of the richest agricultural and virgin hardwood sections of Tennessee."

Gulfport Terminals.

Fisk & Robinson of New York give the following report upon work on the Gulf & Ship Island Railroad:

"Work on the Gulfport terminals is now concentrated on the construction of the creosoted revetment that is to bound the anchorage basin on the north. The open wharves half a mile in length on the west face of the main pier have been finished. Tracks have been laid on the wharves, and the terminals are in uninterrupted use for the exportation of lumber. Shippers having headquarters in New Orleans and Pensacola, as well as Gulfport, are making use of the facilities supplied by the Gulf & Ship Island Railroad."

From Richmond it is reported that traffic on the Richmond, Fredericksburg & Potomac Railroad has recently been so heavy that the company was obliged to borrow several engines from the Pennsylvania Railroad in order to keep traffic moving.

Galveston's Seawall.

Concrete for the foundation of the seawall at Galveston has been laid for more than a square, and it is expected that work on the seawall proper will begin this week. The Galveston News says:

"The contractors are now ready to inaugurate the laying of riprap in front of the seawall. The riprap will be three feet high and extending out into the water from the wall a distance of twenty-seven feet. It is proposed putting in the riprap protection as the foundation is laid and before the wall is erected. The derrick to be used in transporting the riprap from the cars to place in front of the wall is about finished, and some little delay has been occasioned by the tardy arrival of a piece of machinery. It is understood that this work can be prosecuted very rapidly, and that the riprap can be put in at the rate of over 200 feet a day. There is no complaint about material, and in fact the rock is being delivered faster than the contractors can dispose of it in the three-foot foundation being laid. The framework or mold for the wall proper will be built in sections of about twenty-five feet long, or perhaps a little longer. This work will be so regulated that every section must be finished the day it is started—that is to say, if work has been started on a 25-foot section, it would not do to fill this frame with concrete to, say, within two or three feet from the top and finish the job the following day. With 25-foot sections Engineer Boscche said he believed they could finish three of them a day."

One Year in Alabama Coal.

The annual report of the State mine inspector of Alabama shows that 10,328,793 tons of coal were mined in 1902, an increase over the preceding year of 1,358,176 tons. Jefferson county alone mined 5,899,973 tons; Walker, 1,851,079 tons, and Bibb, 1,455,794 tons. The different grades of coal mined were as follows: Lump, 1,049,335 tons; nut, 165,809 tons; slack, 1,228,819 tons, and run of the mines, 7,805,346 tons. The number of workmen employed in the industry, with the figures for Jefferson county incomplete, were 16,979.

It is expected that the Trigg Shipbuilding Co. at Richmond, Va., will be placed upon a new and promising basis within ten days.

Discovery of anthracite coal is reported from Vancouver Island.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Round-Bale Fire Tests.

A committee of the National Fire Protection Association conducted last August an elaborate series of investigations to determine by actual fire tests the efficiency of the more prominent of the improved methods of cotton baling. The committee has prepared an exhaustive report, upon which is based a valuable and interesting article in Insurance Engineering. The tests dealt with the comparative susceptibility of bales to flash fires, the comparative damage from similar intensities of fire for a given period and extinguished with water, the comparative absorption of water when the bale was immersed for a given period, and the comparative extent to which fire will burrow into the bales from a very restricted area of ignition on the outside. The bales used were the gin bale or plantation bale, the recompressed bale, the Lowry bale and the American or roundlap bale. The report of the committee is summarized in the statement that it found the cylindrical bales to be distinctly superior to the square bales as fire risks, the American bale superior to the Lowry, the recompressed bale to the gin, and both cylindrical bales to the dry goods. Commenting upon the report, Insurance Engineering says:

"The results proved conclusively the advantage of the round over the square bales, as well as the decided superiority, taking an average of results, of the American over the Lowry bale. While the order of excellence given by the committee places the Lowry ahead of the American bale in two tests, the burrowing and immersion, the differences were slight, and the tests of comparatively minor import. In the two all-important tests, flash and fire, the American bale showed a slight advantage over the Lowry in the former and a superiority in the latter little short of overwhelming. A compressed bale of cotton must depend upon one of two things to maintain its form: First, an internal bonding effect, tending to hold the whole together, and created when the bale is made. Second, some form of binder, usually of iron strip or wire, passing around the circumference of the bale, and by its tensile strength maintaining the compression. Taking into account the comparatively low temperature at which the tensile strength of iron practically ceases, the result when examples of the two different types were subjected to a fire test of some severity is not altogether surprising. The self-contained bale, which, like the American, is held in form by force from within, is always a complete bale. No matter how much may be burned off the outside, what is left is capable of offering the same resistance as before. The bale which, like the Lowry, is held in form by enclosing bands, is limited in usefulness by the life of the bands. When these break, as they usually do in any considerable fire, the salvage is small."

\$150,000 Knitting Plant.

Wiscasset Mills Co. of Albemarle, N. C., at its meeting on February 3 voted to increase capital from \$300,000 to \$450,-

000. This action will be followed by the establishment of a large knitting plant, as was mentioned in this report on January 29. The company will erect a modern mill structure into which it will remove the 150 knitting machines and complementary equipment of the Windemere Knitting Mills, which plant will be acquired. The Windemere Company is capitalized at \$35,000. The Wiscasset plant has 20,000 spindles producing hosiery yarns, and with the completion of its knitting plant will be enabled to manufacture its yarns into goods ready for consumption. The Elford Manufacturing Co. will occupy the building to be vacated by Windemere, and will install cotton-mill machinery. This latter company now has 20,000 spindles manufacturing hosiery yarns. J. W. Cannon of Concord, N. C., is president of these three companies, and their interests are largely identical.

The Cotton Movement.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight during the five months of the present season ended January 31 was 8,040,989 bales, an increase over the same period last year of 9744 bales. The exports were 4,385,306 bales, a decrease of 148,771 bales. The takings were by Northern spinners 1,365,053 bales, a decrease of 35,110; by Southern spinners 1,024,564 bales, an increase of 109,845 bales.

In his report for February 6 Colonel Hester shows that during the 150 days of the season the number of bales brought into sight was 8,242,183, an increase over the same period last year of 95,848 bales; the exports were 4,563,561 bales, a decrease of 47,477 bales; takings by Northern spinners 1,432,408 bales, a decrease of 23,807; by Southern spinners 1,064,064 bales, an increase of 114,057 bales.

A 10,000-Spindle Mill.

J. A. Abernethy of Lincolnton, N. C., has confirmed the mere report mentioned last week that he is to arrange for the erection of a cotton mill. It has been decided to build and equip with 10,000 spindles for manufacturing fine yarns—numbers 40 to 80—from long-staple cotton, both peeler and Egyptian. A steam-power plant of 400 horse-power will be used. The D. A. Tompkins Company of Charlotte, N. C., is the engineer in charge of construction and equipment. No further details have been decided upon. It is probable that about \$150,000 will be invested.

Adding 5000 Spindles.

The Walhalla Cotton Mills of Walhalla, S. C., will increase capacity, expending probably about \$100,000 for improvements. Contract has been awarded for the additional machinery, which will include 5000 spindles and 175 looms. These looms will be supplied by the Lowell (Mass.) Machine Shops. The available floor space in the building addition erected two years ago will be filled by this new machinery. The company now has 10,000 spindles and 320 looms. Its product is four-yard sheeting, 56x60 inches.

For 30,000 Spindles and 700 Looms.

In its issue of November 13 the Manufacturers' Record announced that the Watts Mills of Laurens, S. C., had effected permanent organization. It was then stated that the company intended to build for an installation of 15,000 spindles and 500 looms. This decision has now been altered, and instead of that equipment there will be 30,000 spindles and 700 looms installed. The product will be

fine yarns and fine cloth, and about 400 operatives will be employed. This change of size of the plant will make the investment about \$400,000 instead of \$200,000, as originally announced. Contract has been let for the construction of the building, and all the machinery has been purchased. J. E. Sirrine of Greenville, S. C., is the engineer in charge. W. E. Lucas is president and treasurer. He is also president of the established Laurens Cotton Mills, a \$350,000 plant.

Textile Notes.

Elford Manufacturing Co., Albemarle, N. C., will install additional cotton machinery. It now has 20,000 spindles.

M. A. Stokes of Savannah, Ga., contemplates establishing knitting mill to cost from \$5000 to \$10,000. The production of hosiery is proposed.

Kesler Manufacturing Co. of Salisbury, N. C., has purchased additional building and will install 5500 spindles. Further details as to the improvements will be announced later.

Opelika (Ala.) Cotton Mills will increase capital from \$100,000 to \$150,000 in order to erect additional buildings and install more machinery. Details have not been announced.

Messrs. R. P. Hamer, Jr., W. M. Hamer, D. M. Carmichael and Allen Edens have incorporated Hamer Cotton Mills to build plant at Dillon, S. C. Its capital stock is placed at \$100,000.

Messrs. L. W. C. Blalock of Goldville, S. C.; George Johnstone of Newberry, S. C.; W. G. Childs and W. H. Lyles of Columbia, S. C., have incorporated Banna Cotton Mills, with capital stock of \$100,000.

Oriental Textile Co., Houston, Texas, has increased capital from \$50,000 to \$100,000 for the purpose of doubling its plant for manufacturing camel's-hair yarn. It has purchased site on which to erect addition.

Griffin (Ga.) Knitting Mills has let contract for the erection of a mill building. This company has its plant established, operating twelve knitting machines, and probably intends to add more machinery. New building will cost \$10,000.

A. M. Hatcher of Houston, Texas, has submitted proposition to Marlin Business League for establishment of \$250,000 cotton mill. Marlin investors are asked to subscribe for \$100,000 of stock and donate forty acres of land as site for the plant.

A. M. Hatcher & Co. of Houston, Texas, have made proposition for establishment of cotton mill at Ennis, Texas. Messrs. J. B. Armstrong, W. L. Harper, J. W. Story and others of Ennis will endeavor to meet the terms of the proposition.

Messrs. W. M. Hamer, G. D. Barlow, A. J. C. Cottingham, T. A. Dillon, E. L. Moore, W. Stackhouse, J. F. Bethea, J. H. David and R. P. Hamer, Sr., have incorporated Maple Cotton Mills, to build plant at Dillon, S. C. The capital stock is \$100,000.

Newton (N. C.) Hosiery Mills will install additional machinery, increasing its daily output from 800 to 1000 dozen pairs. A portion of the new equipment will be adapted for producing fine mercerized hosiery. Company's present capital is \$25,000, and 150 persons are employed.

Messrs. W. H. Magill, F. E. H. McCroskey, G. O. Bicknell, R. C. Kefauver and M. G. Wright have incorporated Madisonville Knitting Mills of Madisonville, Tenn. The company is capitalized at \$25,000, and will build a hosiery mill, details of which have not been announced.

Indian Head Mills of Alabama, Cordova, Ala., is installing 200 looms manu-

factured by the Draper Company of Hopedale, Mass. This machinery takes the place of discarded looms. (This statement explains report mentioned last week that company intended to build an addition.)

P. H. Hanes Knitting Co., Winston-Salem, N. C., is installing the dyeing plant mentioned last week. Contract for building and machinery has been awarded. Dyehouse will be 50x60 feet in size, and capacity will be from 800 to 1000 dozen. Fine ribbed underwear is the mill's product.

Orr Cotton Mills, Greenville, S. C., will manufacture print cloths twenty-eight to forty inches wide in its \$400,000 addition, announced at length last week. The increase of 30,000 spindles and 750 looms, the equipment named last week, will increase the company's total to 56,256 spindles and 1450 looms.

Oakdale Cotton Mills, Jamestown, N. C., contemplates building an additional mill. The company now has 5344 spindles, and is capitalized at \$50,000. Its stockholders have for some time been considering the erection of an addition, and is now endeavoring to have the proposed Raleigh & Western Railroad build its line by Jamestown. This is desired in the interest of more equitable freight rates.

W. J. Hooper Manufacturing Co., 114 South street, Baltimore, Md., has purchased the netting-manufacturing business of the J. S. Johnson Co., also at Baltimore. The Hooper Company some months ago enlarged and improved its plant, doubling the capacity, both as to space and machinery, which leaves ample room to hold the new equipment. The Johnson Company will continue its other departments.

The promoters of the \$100,000 cotton mill for Lafayette, Ga., mentioned last week, expect to organize company in the near future. Subscription lists are now being circulated, and the local business men are responding readily. E. Montgomery of Summerville, Ga., will be superintendent and general manager of the plant when completed. The details will be decided as soon as the entire capital proposed has been obtained.

The Fuller cotton gin has of late been ginning Sea Island and other very long staple cotton with excellent results at the rate of from 500 to 1000 pounds of lint per hour. This gin produces a fine sample which is claimed by the manufacturers of the gin to grade much higher than cotton ginned by a saw gin. Fuller Cotton Gin Co., 126 Liberty street, New York, manufactures the machine. It has established a branch at No. 7 Monroe street, Memphis, Tenn., to handle Southern business.

It is reported that N. F. Thompson of Birmingham, Ala., is negotiating with Eastern capitalists to furnish capital for the erection of a large cotton mill near Florence, Ala. Mr. Thompson and associates have petitioned Congress for permission to develop the power of the Muscle Shoals, near Florence, and in connection with this development the mill is contemplated. It is claimed that from \$2,500,000 to \$5,000,000 will be invested in the joint enterprises if the rights at the shoals are secured.

QUOTATIONS OF COTTON YARNS.

By Buckingham, Paulson & Co., New York, Philadelphia and Chicago, February 10.

No. 10s-1 and 12s-1 warps.....	15 6/15 1/2
No. 14s-1 warps.....	15 1/2 6/15 3/4
No. 16s-1 warps.....	16 1/2 6/15 1/2
No. 20s-1 warps.....	17 6/17 1/2
No. 22s-1 warps.....	18 1/2 6/15 1/2
No. 26s-1 warps.....	19 6/15 1/2
No. 6s to 10s yarn.....	14 1/2 6/14 1/2
No. 12s-1.....	15 6/15 1/2
No. 14s-1.....	15 1/2 6/15 1/2

No. 16s-1.....	16 00
No. 20s-1.....	17 00
No. 22s-1.....	18 00
No. 26s-1.....	19 00
No. 32s-1.....	20 00
No. 36s-1.....	21 00
No. 40s-1.....	22 00
No. 44s-1.....	23 00
No. 48s-1.....	24 00
No. 52s-1.....	25 00
No. 56s-1.....	26 00
No. 60s-1.....	27 00
No. 64s-1.....	28 00
No. 68s-1.....	29 00
No. 72s-1.....	30 00
No. 76s-1.....	31 00
No. 80s-1.....	32 00
No. 84s-1.....	33 00
No. 88s-1.....	34 00
No. 92s-1.....	35 00
No. 96s-1.....	36 00
No. 100s-1.....	37 00
No. 104s-1.....	38 00
No. 108s-1.....	39 00
No. 112s-1.....	40 00
No. 116s-1.....	41 00
No. 120s-1.....	42 00
No. 124s-1.....	43 00
No. 128s-1.....	44 00
No. 132s-1.....	45 00
No. 136s-1.....	46 00
No. 140s-1.....	47 00
No. 144s-1.....	48 00
No. 148s-1.....	49 00
No. 152s-1.....	50 00
No. 156s-1.....	51 00
No. 160s-1.....	52 00
No. 164s-1.....	53 00
No. 168s-1.....	54 00
No. 172s-1.....	55 00
No. 176s-1.....	56 00
No. 180s-1.....	57 00
No. 184s-1.....	58 00
No. 188s-1.....	59 00
No. 192s-1.....	60 00
No. 196s-1.....	61 00
No. 200s-1.....	62 00
No. 204s-1.....	63 00
No. 208s-1.....	64 00
No. 212s-1.....	65 00
No. 216s-1.....	66 00
No. 220s-1.....	67 00
No. 224s-1.....	68 00
No. 228s-1.....	69 00
No. 232s-1.....	70 00
No. 236s-1.....	71 00
No. 240s-1.....	72 00
No. 244s-1.....	73 00
No. 248s-1.....	74 00
No. 252s-1.....	75 00
No. 256s-1.....	76 00
No. 260s-1.....	77 00
No. 264s-1.....	78 00
No. 268s-1.....	79 00
No. 272s-1.....	80 00
No. 276s-1.....	81 00
No. 280s-1.....	82 00
No. 284s-1.....	83 00
No. 288s-1.....	84 00
No. 292s-1.....	85 00
No. 296s-1.....	86 00
No. 300s-1.....	87 00
No. 304s-1.....	88 00
No. 308s-1.....	89 00
No. 312s-1.....	90 00
No. 316s-1.....	91 00
No. 320s-1.....	92 00
No. 324s-1.....	93 00
No. 328s-1.....	94 00
No. 332s-1.....	95 00
No. 336s-1.....	96 00
No. 340s-1.....	97 00
No. 344s-1.....	98 00
No. 348s-1.....	99 00
No. 352s-1.....	100 00

Market very strong and advancing with cotton.

Cottonseed-Oil Notes.

It is stated that a cottonseed-oil mill is to be erected at Jonesboro, Ark., by Memphis parties. Work will begin at once, and the mill will be ready for operation by September 1. It will be of sixty tons daily capacity, and will cost \$70,000.

The Transatlantic Trading Co. reports the shipments of cottonseed products for January as follows: New Orleans exports aggregated 30,145 tons, of which 15,995 tons were cottonseed meal and 14,150 tons were cottonseed cake. The exports from Galveston amounted to 19,210 tons, of which 18,395 tons were cottonseed meal and 815 tons of cottonseed cake.

The Enterprise Cotton Oil Mill Co. was organized last week at Augusta, Ark., with a capital stock of \$50,000, all of which has been subscribed. J. L. Cummer was elected president; Minor Gregory, vice-president; L. E. Bonner, secretary, and E. G. Thompson, treasurer. Work on the mill to be erected will commence as soon as building material and machinery can be placed on the ground.

The Little River Cotton Co. of Ashdown, Little River county, Arkansas, has been incorporated, with a capital stock of \$100,000, of which \$38,500 has been subscribed. The company proposes to sell real estate, to make and sell cottonseed oil and meal, and to operate and sell cotton gins and presses. W. Y. Foster is president of the company; W. A. Arthur, vice-president, and Charles McKee, secretary and treasurer.

Cottonseed products at the New Orleans Cotton Exchange on the 9th inst. were as follows: Prime refined oil in barrels per gallon, 40 cents; off refined oil in barrels per gallon, 37½ cents; prime crude oil, loose, per gallon, 35 cents; off crude oil, loose, per gallon, 28 to 32 cents; prime cottonseed cake per ton of 2240 pounds, \$25.37½; prime cottonseed meal per ton of 2240 pounds, \$25.75; soap stock per pound, loose, 1.15 cents; linters, choice, per pound, 4 cents; A, 3½ cents; B, 3½ cents; C, 3½ cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, \$15; in bulk delivered at New Orleans, per ton of 2000 pounds, \$14.

Quotations for cottonseed products on the New Orleans Maritime and Merchants' Exchange, Limited, on the 9th inst. were as follows (February shipment from the mill): Prime cake, \$25.25 to \$25.37½ per long ton ship's side; off cake, \$23 to \$24 per long ton ship's side, according to quality; prime meal, \$25.75 per long ton ship's side; off meal, \$23 to \$25 per long ton ship's side, according to quality; prime crude oil, 34½ cents per gallon loose f. o. b. mill; off crude oil, 28 to 30 cents per gallon loose f. o. b. mill, according to quality; prime refined oil, 39½ cents nominal per gallon loose in barrels ship's side; off refined oil, 37½ cents per gallon loose in barrels ship's side; soap stock, \$1.10 per 100 pounds, basis 50 per cent. fatty acid; linters (per pound f. o. b. mill flat)—A, 3½ cents; B, 3 cents; C, 2½ cents; low linters, 1½ to 2 cents per pound f. o. b. mill flat, according to quality.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., February 11.

The local lumber market continues to show a steady and substantial trade in many departments, and the outlook for the spring business is promising. The demand from local dealers is moderately active, and from out-of-town buyers there is a good inquiry. Receipts of lumber are somewhat improved in certain lines, but stocks are in some cases much below the normal. In North Carolina pine the demand is regular, and values are firm, and for some grades sales have been made above list figures. The demand for cypress is steady, with values improving, and stocks about ample for the demand. White pine is in moderate demand, with holders firm and values very steady. In poplar the situation is regarded as very encouraging, with an active demand for all the offerings, and prices firm and advancing. The outlook in hardwoods is good, with an active demand for desirable material. Good dry quartered oak and plain sawed oak are selling freely, with prices appreciating. The demand for ash and other woods is active, and values throughout the list are generally of a very healthy nature. The foreign demand for hardwoods is slow, and in domestic lines of business on this side of the water the volume of trade shows that present stocks are being quickly absorbed at satisfactory prices.

Brunswick.

[From our own Correspondent.]
Brunswick, Ga., February 9.

The lumber movement for the past week was without any special features. The coastwise shipments by steamer to New York were 477,531 superficial feet, and to Boston 181,628 superficial feet of lumber. The Clyde steamship line reports 930,085 feet to Boston during January from this port. The Mallory Line to New York will have extra steamers during the incoming week, as its regular ships are taxed beyond their capacity. The foreign exports for past week show only one cargo of lumber, a shipment of 266,000 feet of boards, deals and planks going to Spain. The January movement from the nearby port of Darien amounted to 9,542,518 feet, out of which 6,966,777 went to foreign destinations and 2,575,741 feet to coastwise points. January shipments from Fernandina amounted to 8,357,481 feet; the coastwise cargoes were 4,054,268 feet of lumber and 54,520 pieces of railroad cross-ties, or 2,398,880 superficial feet, making in all a total of 6,453,148 feet. The foreign exports were 1,904,333 superficial feet, all to Spanish ports. Reports from interior and nearby points show that volume of orders is greatly increasing, and that output of mills is much heavier; prices are strong, and stiffening in several dimensions. The forwarding movement is excellent. Freights are quoted from Brunswick to New York at \$5.50 as a basis from South Atlantic ports. Charters are much easier to obtain, and the dispatch is quicker. The movement is extra good. Shingle demand and movement shows strength and a great deal of encouragement. The lath market is still off.

Jacksonville.

[From our own Correspondent.]
Jacksonville, Fla., February 9.

The year has opened with unusual activity in all lines of the lumber industry

of this port, and, in fact, in the interior, as well as at all Florida ports, the activity in the trade of wood products was never more pronounced than at present. The demand for lumber from the usual sources in the North and East is steady, and mills throughout this section have as much as they can do to fill orders. Shipments from this port during January aggregated 14,567,949 feet. During the month of January seventy-six coastwise and thirteen foreign vessels crossed the St. John's river bar. The shipments coastwise of pine lumber amounted to 12,434,000 feet, and of cypress lumber \$16,000 feet. Foreign shipments of pine lumber amounted to 1,217,940 feet, cross-ties 58,000 and shingles 3,525,000. During the past month the Clyde Line steamers have had a most successful carrying trade, each vessel going out with its usual amount of lumber. Prices throughout the general list are very steady, and lumbermen look for a slight advance in the near future. At Ocala last week the Georgia Saw-Mill Association met in monthly session, with Mr. R. H. Paul in the chair, the president, Hon. H. H. Tift of Tifton, Ga., being absent. The meeting, while not largely attended, was a very enthusiastic one; a number of matters relating to the lumber industry were discussed. The principal matter under discussion was the equipment of cars. The March meeting of the association will be held at Tifton, and the April one at Jacksonville.

Pensacola.

[From our own Correspondent.]
Pensacola, Fla., February 9.

The situation in all departments of the timber and lumber trade of this section is now showing a very steady tone, and the demand more decided than has been known for some months past. The monthly statistics compiled by the collector of the port show that January was a good month for shipments, over 30,000,000 feet of lumber and timber having been exported. The timber market is now on a firm basis, and while fluctuating according to the demand, both the exporter and manufacturer seem satisfied with the situation. The receipts are liberal, and it is stated that on the 5th inst. over 200 cars of lumber and timber arrived over the lines of the Louisville & Nashville Railroad, this being in addition to the receipts by water during the past week. Shipments of lumber and timber were made the past week to the following ports: Avonmouth, 10,000 superficial feet of lumber, 759,000 superficial feet of sawn timber; Genoa, 1,695,000 superficial feet of sawn timber; Frederickstad, 88,200 superficial feet of lumber, 60,000 pieces of shingles; Christianstad, 92,007 superficial feet of lumber, 15,000 pieces of shingles; Cagliari, 18,000 superficial feet of lumber, 470,000 superficial feet of sawn timber; Genoa, 323,000 superficial feet of lumber, 290,000 superficial feet of sawn timber, 19,200 pieces oak staves; Naples, 820,655 superficial feet of sawn timber, 3406 cubic feet of hewn timber; Bizerte, 36,000 superficial feet of lumber, 180,000 superficial feet of sawn timber, 132,542 superficial feet of deals and boards; Liverpool, 192,000 superficial feet of lumber, 727,000 superficial feet of sawn timber; Leghorn, 365,000 superficial feet of lumber, 1,408,000 superficial feet of sawn timber; Belize, 122,000 superficial feet of lumber, 5000 pieces of shingles; Philadelphia, 326,000 superficial feet of cypress lumber—or a total of 7,496,369 superficial feet of lumber and timber. The sawn-timber manufacturers at Brewton have placed the minimum basis price of sawn timber at 17 cents. Among the charters reported this week are the British steamer Earlswood, 1480 tons, from Pensacola to picked ports in the United Kingdom, including

Waterford, with timber at 82/6, March; Russian bark Colin Archer, 689 tons, from Apalachicola to United Kingdom, Continent or Baltic with sawn timber at 92/6, and hewn timber at 30/, and German steamers Lucida, 902 tons, and Denebois, 910 tons, from the Gulf to the Continent with timber on private terms.

Mobile.

[From our own Correspondent.]
Mobile, Ala., February 9.

During the past week there has been an increased activity in the timber and lumber trade of this port, while all along the Gulf mills are rushed with business. The timber trade is improving, and values seem to have settled down on a firmer basis, prices ranging from 17 to 18 cents for sawn timber, as to average. The shipments of sawn timber last week reached nearly 300,000 cubic feet, going mostly to continental ports. Receipts of logs everywhere are more liberal, and the mills are well supplied, nearly all running on full time. Exporters are feeling much better over the situation, and the outlook for a good spring trade is exceedingly bright. The demand for lumber is most decided, coming from the interior and from Northern and Eastern centers. The market for prime lumber is active, and mills have orders from sixty to ninety days ahead. Heart-face flooring is in light supply, and is quickly taken on leaving the mill. There is also a good demand for kiln-dried saps, which goes to supply the interior market. From Cuba, South America, Mexico and United Kingdom and Continent a great improvement is notable in the demand. During the week 2,800,000 feet of lumber left the port, a large proportion of which went to the countries named. There is also a good inquiry from the United Kingdom and Continent. During the season 35,641,348 feet of lumber has been shipped, against 37,475,551 feet last year. Freight rates on timber continue steady. Charters closed this week at \$1/3, Gulf to Greenock, February; Pensacola to Genoa, 82/6, option west coast Italy or Continent, 83/9; Continent and United Kingdom, 86/3, February-March; Pensacola to West Britain, 80/.

Memphis.

[From our own Correspondent.]
Memphis, Tenn., February 9.

There has been no let-up whatever in the demand for hardwood lumber in this center and in the territory comprised in the Memphis district. In fact, if there has been any change at all, it has been in the direction of greater activity on the part of purchasers. There were numerous buyers here during the past week, all seeking to secure lumber for immediate or forward shipment. Some of them were successful in their search, being rewarded by finding what they wanted, though many of them had to go away either partially or completely empty-handed, so light are the general offerings and so broken are the stocks of dry hardwood lumber held in this city. Stocks are now the lightest held here at this time for a number of years, and with the prevalence of the present rainy conditions, there is absolutely no ground for the hope that there will be any increase in the offerings of dry stock in a number of weeks at the earliest. Prices show a further hardening tendency, and are now ruling very firm around the highest point of the present hardwood lumber "boom," which has been in progress steadily for the past few months. The inquiry for stock for forward delivery is becoming more pronounced, which is the best possible sign that present prices are due to be maintained for some time to come, or higher ones still. Those who are giving these orders for forward shipment are paying

full "spot" prices therefore, a thing which they would not begin to do if the outlook had about it anything that would suggest the possibility, much less the probability, of a lower level of values. Some of the trade here report their stocks in certain lines sold ahead for several months, while in some instances the output of some woods has been sold to the end of the present year. Cottonwood is one of the scarcest items in the list, and is proportionately one of the highest. Cottonwood logs are selling at more than \$10 per thousand feet, delivered on the river banks, and the manufacturers are forced to ask a fancy price for the stuff in order to come out with any margin of profit at all. Commons and culls, inch stock, are selling at \$16 to \$17 per thousand, f. o. b. Memphis, and firsts and seconds range all the way from \$23 to \$28 per thousand, with box boards at \$30 to \$32 per thousand. Cottonwood has gotten so high that some of the consumers have ceased to use it at all. The box people are using gum for cheap boxes, and in various directions a substitute is being found for this wood. Quartered white oak is relatively scarce, and there is no accumulation sufficient to depress prices in any direction. Sixty dollars per thousand continues about the average price for quartered white oak in inch stock. The Anderson-Tully Company reports the purchase of 4000 acres of timber land near Greenville, Miss. The timber, which is cottonwood, is to be manufactured at the mill of the company just opened at Vicksburg, Miss., with a capacity of 55,000 feet per day. The timber will be floated down the Yazoo canal. The same company confirmed the report of the purchase of 16,000 acres in Western Tennessee, known as the Fort Pillow property. This timber will be floated down to the plant of the company here. The car situation, while slightly better than last week, on account of the removal of the embargo of the Frisco and the Illinois Central, is still very bad, and the lumbermen here have gotten almost to the point where they "sit up nights hating railroads" and cursing their ill luck on the car question. The railroads seem powerless to combat the continual congestions of traffic occurring here, owing largely to their inadequate terminal facilities. The box plants are as busy as they can be, one firm reporting to your correspondent that it was more than fifty cars behind in its orders, and all the others here declaring that they had so much contract business that they were scarcely in position to take any new orders unless for a long term. The cooperative plants are likewise enjoying the most active period in their history, and are still unable to cope with the demand successfully enough to be able to fill all orders.

Lumber Notes.

The McRae Lumber Co. of Tallahassee, Fla., has been chartered, with a capital stock of \$50,000. The incorporators are G. L. McRae, Marian Currie and A. B. McRae. The concern will erect a saw-mill.

The Hastings Lumber Co. of Memphis, Tenn., has been incorporated, with a capital stock of \$2500. The incorporators are E. M. Richardson, R. B. Hastings, William Pritchard, R. C. Montgomery and K. D. McKellar.

The Alamo Lumber Co. of San Antonio has been chartered, with a capital stock of \$300,000. The incorporators are Samuel V. Houston of Floresville and George A. Dascomb, William Negley and George Vaughan, all of San Antonio.

The shipments of lumber from the port of Jacksonville for the month of January were as follows: Pine lumber coastwise,

12,454,000 feet; cypress lumber, 58,100 feet; cross-ties, 58,100; shingles, 3,525,000, and pine lumber, foreign, 1,217,946 feet.

The Knobb's Creek Lumber Co. of Elizabeth City, N. C., has been incorporated, with a capital stock of \$25,000. The incorporators are W. Lynch of Walkertown, Va.; C. D. Bundy, H. T. Greenleaf, C. W. Hallowell and S. S. Hardison of Elizabeth City.

The E. S. Adkins Company of Salisbury, Md., has incorporated to erect another large planing and box mill 80x100 feet. The present mill will be fitted for the manufacture of inside finish, cabinet mantels, etc. About \$10,000 will be invested.

The Longview Crate & Woodenware Co. of Longview, Texas, closed a contract last week with a shipping concern for 1,100,000 feet of cottonwood timber for making box ends and wishes to contract soon for 1,000,000,000 feet. The plant of the company will be in full operation soon.

The Huttig-Moss Lumber Co. of St. Joseph, Mo., purchased last week 22,000 acres of cypress land from the Rives-Brogan Shingle Co. in St. James, Assumption and La Fourche parishes, Louisiana, west of New Orleans, for \$1,000,000. The company will reduce the price of shingles in the North.

Business last week at Mobile showed considerable improvement, and shipments were as follows: Lumber, 2,537,392 feet for the week, and for the season 35,641,348 feet, against 37,475,551 feet last year. Shipments of sawn timber for the week were 276,156 cubic feet, and of hewn timber 1093 cubic feet.

The following vessels cleared with lumber cargoes from Charleston, S. C., last week: Schooners Thomas Winsmore 301,000 feet and Pasadena 487,000 feet, both for New York. The steamship S. T. Morgan cleared for Philadelphia with 1,400,600 feet, and the schooner James D. Dwell cleared for New York with 500,000 feet.

It is stated that the H. C. Akeley Lumber Co. of Minneapolis, Minn., has sold its mill plant, logs and lumber to the Itaska Lumber Co. of Chicago at a valuation of \$1,200,000. This does not include standing timber or other property. Mr. Freeman S. Farr of Georgetown, S. C., is interested, being one of the founders of the company.

The Hall's Creek Lumber Co. of Mobile, Ala., has been incorporated, with a capital of \$60,000, to do a general lumber business and operate a saw mill in the county of Mobile. Lloyd Batre is president; E. A. Dolive, vice-president, and Thos. F. Shepherd, secretary and treasurer. The incorporators are E. H. Roseberry, R. H. Wilson and E. A. Dolive.

The annual meeting of the Southern Pine Co. was held last week in Savannah, Ga. The reports showed that the past year had been a most satisfactory one. The following officers were elected for the ensuing year: Henry P. Talmadge, Netherwood, N. J., president; William B. Stilwell, Savannah, secretary and treasurer. General Superintendent W. O. McGowin was reappointed, with headquarters at Oofferman, Ga.

A meeting of the Georgia Saw-Mill Association was held last week at Ocala, Fla. In the absence of President H. H. Tift, Mr. R. H. Paul of Watertown presided. The meeting was an enthusiastic one, and many matters of interest to the association were discussed. The equipment of lumber cars was made the special matter of discussion. The March meeting of the association will be at Tifton, Ga., and the April meeting at Jacksonville, Fla.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,

Baltimore, Md., February 11.

In the phosphate market the volume of business is light, but the market is very steady, as in other fertilizer ingredients. During the week the British steamer Fernlands was chartered to load phosphate rock at Fernandina for Ghent at 12/3, February; schooner W. H. Yerkes from Port Tampa to Baltimore with phosphate rock at \$2.25, and schooner Cordelia E. Hayes, 1020 tons, from Port Tampa to Baltimore with phosphate on private terms. From Southern phosphate points the situation improves, and prospects are good for a fair volume of trade during 1903. In Florida stocks of hard rock are much lower than for the corresponding period last year, and it is said that from 60,000 to 70,000 tons will about cover the shortage. The outlook for hard rock is fair, and prices steady. The shipments of hard rock last year were 490,500 tons from all Florida ports, against 422,560 tons for 1901 and 348,560 tons for 1900. In the land pebble section there is decided activity, and the outlook for the present year is regarded as satisfactory. Prices for land pebble are slightly higher than last year, as shown by contracts made for 1903-1904. The Peace river output this year will be considerably increased by the company, and shipments from Punta Gorda will show a much larger tonnage. In the Mt. Pleasant district in Tennessee operations in phosphate rock have been considerably retarded by bad weather, and stocks above ground are much reduced. With settled weather, however, the output would be largely increased. The tone of the market for both domestic and foreign rock is strong at recent quotations. The South Carolina market is firm for both crude and air-dried rock, and the demand moderate. The companies at work at Beaufort and other points are making good progress.

Fertilizer Ingredients.

The ammoniate market is strong, with a good demand from Southern sources. The tendency all along the line is toward a higher range of values. There is some inquiry from Eastern buyers.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$3 15 @ 3 17 1/2
Nitrate of soda, spot Balto...	1 97 1/2 @ 2 02 1/2
Blood	2 65 @ 2 67 1/2
Azotine (beef)	2 52 1/2 @ 2 55
Azotine (pork)	2 52 1/2 @ 2 55
Tankage (concentrated)	2 57 1/2 @ 2 42 1/2
Tankage (3 and 20)	2 55 & 10 1/2 @ 2 60 & 10
Tankage (7 and 30)	20 50 @ 21 00
Fish (dry)	32 50 @ 35 00

Phosphate and Fertilizer Notes.

Col. J. D. Calhoun, secretary of the Tampa Board of Trade, reports the shipments of phosphate rock from that port for 1902 at 412,091 tons, valued at \$2,304,096.

The Midland Chemical Co. of St. Louis, Mo., has been incorporated, with a capital of \$3000. The incorporators are Fred H. Semple, Charles A. Rausher, W. J. Buchanan, W. A. Hogan and Oscar Heimann.

The Josh F. Moore Drug Co. of Meridian, Miss., has been incorporated, with a capital stock of \$35,000, to be increased to \$50,000. The incorporators are Josh F. Moore, C. M. Harmon, C. B. Moody and others.

The Fortune-Ward Drug Co. of Memphis, Tenn., has been incorporated, with a capital stock of \$20,000. The incorporators are T. P. Fortune, Frank C. Huse, S. M. Benton, Ben L. Fortune and Francis W. Ward.

A deed in phosphate land was filed in Columbia, Tenn., last week conveying to

the Virginia-Carolina Chemical Co. the Ridley place, near Mt. Pleasant. The place contains 580 acres, and the consideration paid was said to be \$75,000.

It is stated that the Alabama Chemical Co., formerly of Charleston, S. C., may locate a large plant in Montgomery for the manufacture of fertilizer. Definite information will be given out in a few days as to the location of the plant.

The phosphate outlook in Polk county, Florida, is said to be very encouraging, with the prospects for shipments better this year than for any former one. Mr. Joseph Hull is installing a compressed-air machine in his extensive phosphate plant near Mulberry to increase his supply of water.

The shipments of high-grade Florida phosphate rock from the port of Savannah for the month of January, as reported by Messrs. J. M. Lang & Co., amounted to 7157 tons, all going to ports in Holland and Germany. The steamship Shandon cleared on the 4th inst. for Bremen with 1048 tons of phosphate rock among her cargo, valued at \$10,480.

The stockholders of the Antigua Chemical Co. of Richmond, Va., held their first annual meeting last week in that city. The business of the company during the past year has been extremely gratifying. The officers elected for the ensuing year were Messrs. E. D. Taylor, president; W. F. Powers, vice-president; R. L. Powers, treasurer; L. N. Fox, secretary, and J. F. Gibboney, general manager.

To Develop Charlottesville.

The Chamber of Commerce of Charlottesville, Va., is leading in a movement to develop that city industrially. Mr. Charles G. Maphis of the staff of the Daily Progress of Charlottesville, which has recently published some inspiring editorials on this line, and secretary of the Chamber of Commerce, quotes, in a letter to the Manufacturers' Record, one of the city's business men as suggesting that there would be no trouble in raising in that city most of the money for one or more manufacturing enterprises requiring a moderate amount of capital, if some good person could be secured acquainted with manufacturing and willing to put some capital in the enterprise as manager.

Iron and Steel Statistics.

As a souvenir of the completion of his thirty years' continuous service, first as secretary, and afterward as general manager, of the American Iron and Steel Association, Mr. James M. Swank has presented to the members of the association a handy compilation of statistics of iron and steel, iron ore and coke for the United States and for four European countries—Great Britain, Germany, France and Belgium—bringing all available statistics down to the end of 1901. The compilation is a valuable addition to the literature in every-day use by the thousands of persons interested in the industrial progress of the world.

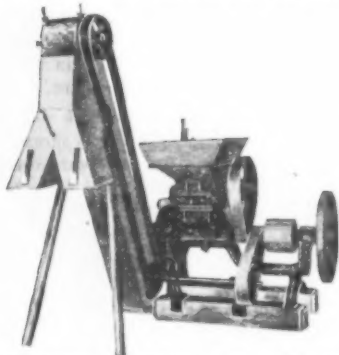
It is announced that on the first of March the rates on pine lumber shipped from the mills of the South to the North will be advanced two cents on the hundred pounds. The present rate is nineteen cents per hundred, and the new rate will therefore be twenty-one cents. The mills of Texas, Mississippi, Louisiana, Arkansas, Alabama and Georgia will be affected.

The sales in the Joplin (Mo.) district during the week ended February 7 were 8,868,350 pounds of zinc ore and 1,347,640 pounds of lead ore, of a total value of \$174,282.

MECHANICAL.

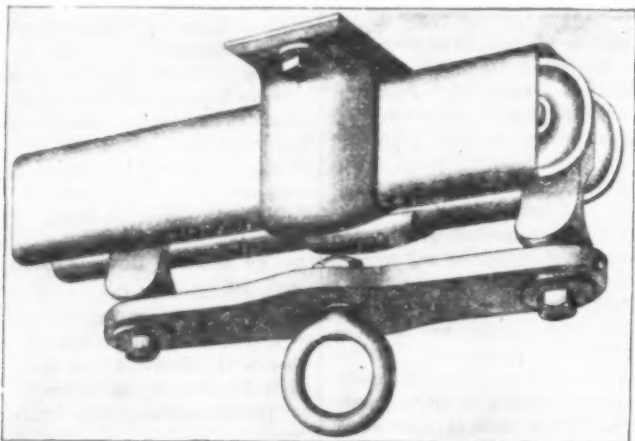
Self-Contained Feed Plant.

Since the grinding of whole-eared corn first arrested the attention of stock-feed-



COMBINED CRUSHER AND GRINDER.

ers the demand has constantly increased, until lately grist millers in all parts of the country have had a heavy demand from their customers to grind ear-corn feed. It is stated they have found bur-



SINGLE COBURN TROLLEY, FOR HANDLING LOADS UP TO 1000 POUNDS.

stones entirely unsuitable for the work, and that even where they had an exceptional stone that did fairly well it was necessary to first crush the ear corn into small enough pieces to be fed to the stones. Further report is that rolls were found unsatisfactory, on account of their

from one end of the country to the other, the Foos Manufacturing Co., Springfield, Ohio, being best known for its production of grinding mills that produce the soft, palatable meal that is so nutritious to all kinds of stock. The outfit has a double-discharge sacking elevator, so that one sack may be filling while the other is being tied and taken away, thus allowing continuous operation. It will be readily seen that the entire machine is driven by one belt, that it is self-contained and can be moved without difficulty, so that its installation in rented property does not make it a fixture of the premises.

Overhead Conveying System.

Tubular overhead tracking and conveying systems are being installed in manufacturing, storehouses and shops of every description in all parts of the world, mainly because men of business appreciate the fact that it is a means of saving many dollars.

The advantages of such a system lie not only in the amount of labor saved, which is considerable, but also in the fact that the heaviest of loads can be moved

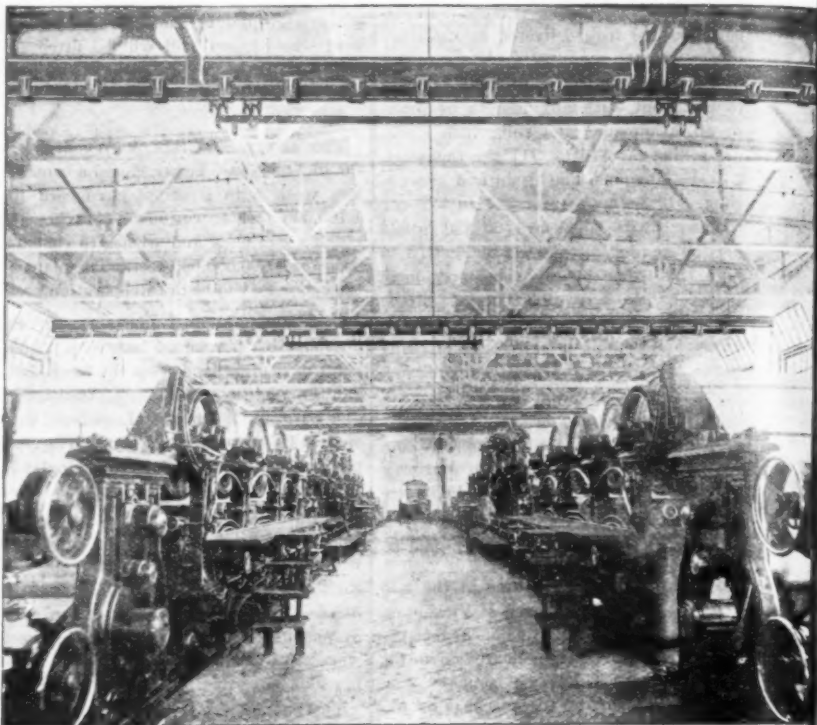
structed so as to travel around very short curves. The material described above is the patented Coburn trolleys and track, which is installed by the New Jersey Foundry & Machine Co., 9-15 Murray street, New York.

Jeffrey Drying Machinery.

An accompanying illustration shows a dryer for treating cereals, flour, pulverized granular products, ores, chemicals,

the material through the tubes, but keep it in a constant state of agitation, which is one of the essential points in a perfect drying machine. The conveyors are made right and left, which passes the material along through the first tube and then back through the second, and so on, until the discharge point is reached, at the bottom of the dryer, or at the intermedial discharge point, if so desired.

The exhaust fan forms an important

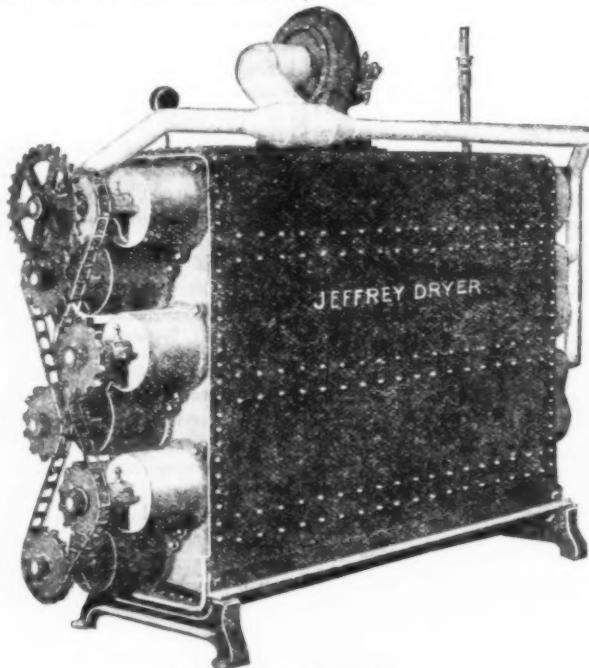


COBURN CARRYING TRACK IN A HOLYOKE PAPER MILL, USED IN TAKING OUT PRESS ROLLS FROM MACHINES.

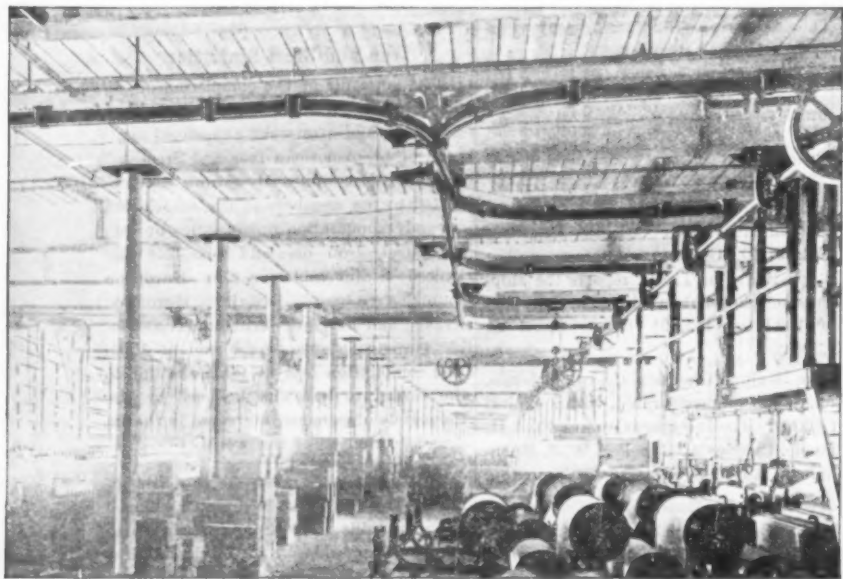
etc., built by Jeffrey Manufacturing Co., Columbus, Ohio.

These dryers are built to order in sizes and dimensions to suit requirements. The dryer consists mainly of a steam-tight tank that will stand a pressure up to eighty-five pounds, a series of tubes with independent conveyors and an exhaust

part, in that, by its suction, dampness as it arises from the material is at once drawn out of the tubes, leaving the air pure and dry. The fan is run independent of conveyors, and at such a speed as to insure perfect work. Hot air, exhaust or live steam can be used, the latter preferred.



THE JEFFREY DRYER.



COBURN CARRYING TRACK IN A NEW BEDFORD COTTON MILL, USED TO TRANSFER ROLLS OF COTTON CLOTH TO AND FROM SLASHER.

large first cost and the fact that they afforded no relief from the extra crusher. In meeting the demand for a perfect machine the Foos Manufacturing Co. introduced the self-contained combined crusher and grinder illustrated herewith.

This equipment has found great favor

any other surface conveyance it would be next to impossible.

The trolleys used are built either in double or single style, according to the weight of the load to be carried. They are ball-bearing, assuring an almost frictionless and easy motion. They are con-

fan. The whole is mounted on an iron stand, and is substantially built throughout. The tank is of heavy sheet iron, and tubes are seamless. The arrangement of tubes is such as gives them a large heating surface, so that the material is operated upon quickly. The conveyors are of the screw pattern, which not only force

As will be seen from the illustration, each tube is connected with the exhaust fan. The conveyors are moved by sprocket-wheels and chain, and the whole can be run from the drive-shaft by means of ordinary belt or chain. The dryer needs no attention after it is started. The feed can be arranged to work automatically

from bins, while the discharge can be taken care of in various ways.

The capacity of this machine is from one to fifteen tons per day, according to the percentage of moisture and the nature of the material and heat.

Those interested in this class of machinery are invited to address the Jeffrey Manufacturing Co.

The Philadelphia Bourse.

Ever since its establishment the machinery-exhibition department of the Philadelphia Bourse at Philadelphia, Pa., has been a success. The facilities offered to manufacturers and builders of different kinds of machinery and equipment for the proper exhibition of their product has attracted investigators and prospective buyers from all parts of the United States.

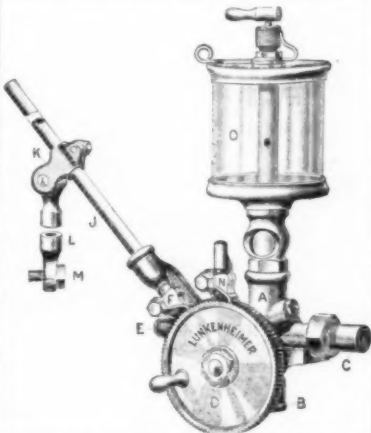
Those companies and firms that have availed themselves of the opportunities for establishing close relations with the buying public number some of the most prominent and best known in the industrial world.

The Philadelphia Bourse's prospects for 1903 are of the most encouraging kind. Many additional exhibits will soon be ready for inspection. J. W. Cregar Agency of Philadelphia has again rented additional space for a further display of machinery and mechanical appliances. W. S. Quigley and Paul Kranstein of Woodbury, N. J., have rented space for a display of machine-tool specialties, automatic revolving jar-chucks, etc., and the Charlier patent rolling furnace. E. F. Houghton & Co., 249 West Somerset street, Philadelphia, have rented space to show their oils, mill supplies and complete mill equipment. They will be represented by J. W. Cregar Agency in the Bourse. National Pyrograph Co., South River, N. J., has rented space for office and for display of fire-brick, vitrified brick and fireproofing materials. J. R. Vandeyck Co., 136 Liberty street, New York, has established an office in the Bourse and rented a large space to display the machines whose manufacturers they represent. The Vandeyck Company has made arrangements to represent Messrs. Hill, Clarke & Co. of Boston, and also handle the machinery built by Western Radial Drill Co., Milwaukee Milling Machine Co., Bath Universal Grinder and a line of Chicago tools controlled by Hill, Clarke & Co. Also represented by Vandeyck is Bradford Machine Tool Co., maker of the Bradford lathe; Higley Machine Co., cold-metal saws and grinders; American Machinery Co. of Grand Rapids, maker of woodworking machinery. The Vandeyck exhibit is in charge of the Philadelphia manager, Albert G. Lea, who was connected with W. E. Shipley prior to the first of the year.

The successful results that have been accomplished prompt expressions of opinion from many Bourse exhibitors. For instance, E. A. Blanton, Jr., says that "prospective purchasers can accomplish more in several hours or a day at the Bourse than is possible to do in a week or more in the old way of necessarily having to visit each manufacturer at his works." Charles F. Chase says: "Any one having that which possesses real merit must find the Bourse helpful in building up a permanent trade." C. E. Dorsey, after selecting the Bourse for exhibition purposes, says: "We have made sales to a number of people who stopped to see our exhibit who had never before heard of the addressograph, some of whom did not even know there was such a thing as an addressing machine perfected and for sale. We do not believe the advantages of the Bourse in this regard could be overestimated."

Lunkenheimer Mechanical Oil Cup.

Realizing the demand for a positive mechanically-operated lubricator, and as the result of considerable study and experimenting to produce a first-class lubricator of this kind, the pump herewith illustrated is being introduced. This method of lubrication is claimed to be more reliable than that obtained by lubri-



LUNKENHEIMER MECHANICAL OIL CUP

cators hydrostatically operated, and when properly constructed the oiling is absolutely positive and all of the oil fed to the pump is bound to be forced to the steam chest or cylinder of the engine.

Referring to the illustration, it will be seen that the driving mechanism is of the ratchet type, and is operated by the clutches F and N, that work co-opera-

By moving the part K up or down the rod the stroke of the pump can be lengthened or shortened, as desired, thus regulating the amount of oil fed by the pump independent of the feed from the oil cup. The joints of the cup are tight, the sight-feed glass being packed so as to prevent the access of air that would have a tendency to cause the cup to feed after the engine had ceased running. This construction and the use of check valves in the pump prevent oil supply from flooding.

The outlet C is piped to the steam pipe or chest of the engine, and the spring check valve X should be placed as near the end of the pipe as possible, preferably into the steam pipe.

The bottom of the pump body B is tapped one-half-inch pipe thread to receive a stand, so that it can be placed wherever desired. The pump is substantially constructed, the workmanship being first class, and, as the parts are made to jigs and templates, they can all be easily renewed, being perfectly interchangeable.

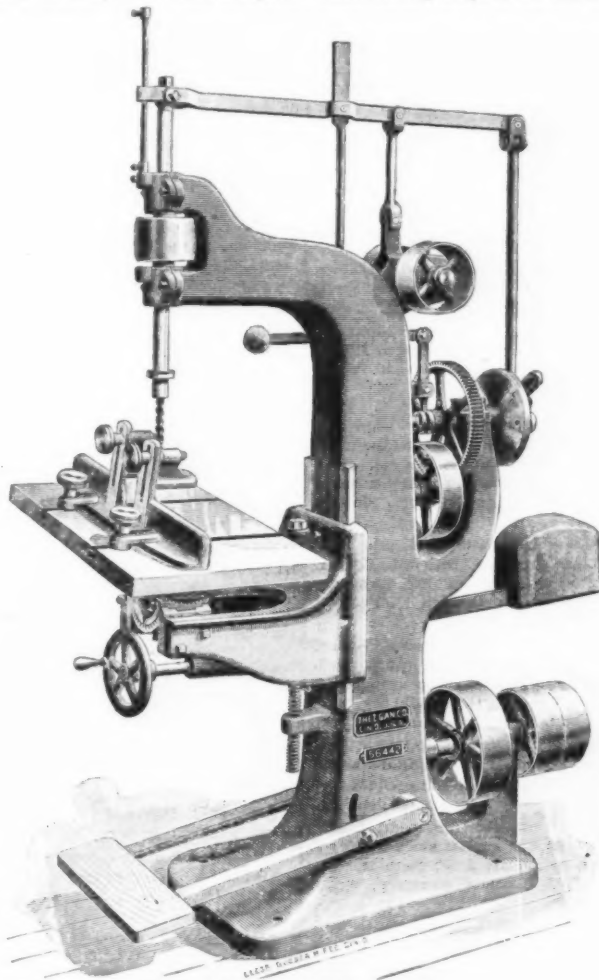
The ratchet wheel D and pawls F and N are made of tool steel, tempered and hardened. All other metal parts about the pump are made of the very best hard bronze composition.

The pump is listed with or without oil cup.

It is manufactured by the Lunkenheimer Company, Cincinnati, Ohio.

New Single-Spindle Vertical Borer.

One of the most necessary machines in woodworking shops is the one for boring.



No. 3 SINGLE-SPINDLE BORER.

tively by the motion of the rod J, which can be attached to the eccentric rod or other moving parts of the engine by the couplings K and M. The motion thus obtained is transmitted to the piston E by the crank-pin mechanism H and G.

The ratchet wheel D is provided with a handle, whereby it can be rotated by hand in case it is desirable to force a quantity of oil at any time, as, for example, when starting the engine.

There is a continual demand for a tool of this character, and therefore all interested in this class of machinery are on the lookout for the one having the newest designs and latest improvements in order to insure good work and prove labor-saving.

The machine here shown possesses many original features. The fact that it has met with success wherever used proves that it must have merit.

A feature on this machine is that it has a larger range than usual, taking eighteen inches between the boring bit and the column. The automatic stroke can be varied to ten inches, and the machine has adjustment to bore any depth to twelve inches. A boy can operate it and do more boring than on three ordinary machines, and the speed can be varied as desired.

The machine is self-contained, and all its adjustments are quickly and easily made. There is very little vibration, as the machine rests on a substantial base, and it is compact in every respect, so that either light or heavy work can be done with facility.

It is made by J. A. Fay & Egan Co., 270 West Front street, Cincinnati, Ohio.

TRADE NOTES.

Coal-Mining Stock.—Coah & Dalbey, 2023½ First avenue, Birmingham, Ala., want to sell \$5000 worth of coal-mining stock. It is claimed these securities are in a profitable business. An exchange for yellow-pine timber would be considered.

Wanted—Wagon-material Plant.—There is a large supply of choice hickory, white oak and ash lumber at Natchez, Miss. This city is therefore an admirable site for a wagon-material manufactory. In order to secure such an enterprise local interests offer free site and capital to assist. Information can be obtained from S. McDowell.

Royersford Plant Busy.—The demand for the punch and shears manufactured by the Royersford Foundry & Machine Co. of Royersford, Pa., continues to increase. This argues for the merits of the equipment. The company is operating its entire plant on full time, there being a large and increasing call for the various engines, boilers, pumps and other machines offered to users.

Hugh S. Morrison.—Hugh S. Morrison, mechanical engineer, 1107½ East Main street, Richmond, Va., announces that he succeeds Morrison & Kindervater. He will concentrate his entire time and attention to the design and superintendence of the construction and equipment of complete power and manufacturing plants, making a specialty of shop and mill buildings.

The Nernst Lamp.—The Electrical Material Co., Baltimore, Md., sales representative of the Nernst Lamp Co., has met with such great success in placing Nernst lamps throughout the South it has hardly been able to fill all orders from the large stock carried in Baltimore. It is the intention to increase the stock so as to make immediate shipments of future orders.

Carlson's Cement Works' Contract.—The \$1,500,000 company that has been formed by Chicago capitalists to build a cement plant near Cartersville, Ga., has awarded contract for construction, Messrs. A. G. Carlson & Co., 155 Washington street, Chicago, mechanical engineers, will have charge of the erection and installation, and will purchase all machinery connected with said plant.

Southern Car & Foundry Co.—This company has received contract to supply 1200 box cars (capacity 80,000 pounds each) to the Atchison, Topeka & Santa Fe Railway. These cars will be built at the Audiston (Ala.) plant. The recent accident in the car works' boiler plant was traced to negligence, and the damage is now being repaired. There is no interference with car construction on this account.

Steele Brick Machinery.—Frick manufacturing is a coming industry in the South. Activity in this direction naturally follows the growth of cities and towns by the erection of various buildings. The "New South" brick machinery is supplied by Messrs. J. C. Steele & Sons of Statesville, N. C. They report many orders on hand and more being constantly received. The latest orders came from all parts of the South—North Carolina, Virginia, Louisiana, Alabama, Georgia and Mississippi.

Standard Car Co.—John M. Hansen, president of Standard Car Co., Pittsburg, makes the following statement regarding the continued suits alleging infringement of patents: "In the formation of our company and in the designing of our cars every step was taken only after the most careful study and thorough preparation. * * * We feel sure that in no particular have our designs and patents infringed upon the legitimate designs or patents of any car company. We are prepared for any legal action that may be taken."

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Flour Mill.—It is reported that Weneeda Mills contemplate building flour mill of 250 barrels daily capacity.

Anniston—Lime Works.—F. C. Cheney contemplates building lime works, and possibly later a crusher for reducing fluxing stone.*

Bessemer—Coal Mines.—Guy M. Lovejoy, T. J. Cornwell and others have incorporated Warrior River Coal & Land Co., with capital of \$30,000, to open coal mines.

Birmingham—Bridges.—Jefferson county will build three steel bridges to cost over \$3000. Address "Board of Revenue."

Birmingham—Flour Works.—Austin Bryan Manufacturing Co., lately reported as making extensive improvements, will be absorbed by Empire Flour Co. of Cleveland, Ohio, which can be addressed by inquirers.*

Birmingham—Coal Mining.—Incorporated: Upper Cahaba Coal Co., capital stock \$50,000, by H. L. Badham, J. L. Dillon and David Roberts, for mining coal.

Birmingham—Brick Works.—Jefferson Brick Co., reported last week with \$12,000 capital, continues three established plants with annual output of about 70,000,000 bricks.

Birmingham—Refiner and Smelter.—Garnet Smelting & Refining Co. will build plant in Tallapoosa county for refining and smelting gold and other ores.

Birmingham—Iron Furnace.—It is rumored that Woodward Iron Co. is preparing to build a third furnace at Woodward.

Birmingham—Livery, etc.—Chartered: Hickman-Dupuy Livery & Transfer Co., capital \$2000, by R. S. Hickman and James A. Dupuy of Ensley and Joe O'Hall of Birmingham.

Birmingham—Coal Mines.—Incorporated: Bradford Coal Co., by D. M. Drennen, F. M. Drennen and H. A. Drennen.

Birmingham—Iron Mines.—J. H. Hill has begun development of coal mines four miles from city.

Birmingham—Dairy.—W. M. Glass, mentioned last week, also W. L. Ellis of Prattville, Ala., and R. E. Loveless of Dothan, Ala., will establish Hillside Dairy Farm, capitalized at \$5000. Company will sterilize milk and manufacture butter and ice cream.

Address Box 443. No contracts have been let.*

Boaz—Excelsior Factory.—Boaz Saw & Lumber Co., contemplates installing excelsior machinery.*

Cordova—Cotton Mill.—Indian Head Mills of Alabama, mentioned last week, is installing 200 looms, taking the place of discarded machinery.

Dadeville—Gold Mines.—Henry Allen, 2305 Eighth avenue, Birmingham, Ala., is negotiating with Northern capitalists to arrange for developing gold properties near Dadeville.

Florence—Iron Mines.—William S. Douglass of Florence and C. E. Wilson of Russellville, Ala., have purchased for development 200 acres of iron-ore lands.

Florence—Cotton Mill.—It is reported that N. F. Thompson of Birmingham, Ala., is negotiating with Eastern capitalists to furnish capital for erecting cotton mill in connection with proposed development of power at Muscle Shoals. Congress is being asked for permission to develop this power. It is claimed from \$2,500,000 to \$5,000,000 will be invested.

Gurley—Iron Furnace and Mines.—Gurley Coal Mining Co. is preparing to develop iron mines, and it is reported may possibly erect an iron furnace.

Livingston—Water-works Improvements.—The town contemplates installing boiling plant in connection with its artesian well water supply system. Address John H. Norville, Intendant.*

Marion—Ice Plant.—Marion Light & Power Co. will build an ice plant, expending probably \$10,000.

Mobile—Saw-mill.—Incorporated: Hall Creek Lumber Co., capitalized at \$6000, to build saw-mill. Lloyd Batre is president; E. A. Dollive, vice-president; Thomas F. Shepherd, secretary and treasurer.

Montgomery—Fertilizer Works.—It is reported that Alabama Chemical Co., represented by J. W. Huger, formerly of Charleston, S. C., but now of Montgomery, will establish fertilizer works.

Montgomery—Oil Mill.—J. D. Hendrix of Montgomery, E. Van Winkle and J. J. Dissosway of Atlanta, Ga., and others will organize \$100,000 company to build cottonseed-oil mill of eighty tons capacity daily.

Opelika—Cotton Mill.—Opelika Cotton Mills will increase capital from \$100,000 to \$150,000 for erecting another building and installing additional machinery.

ARKANSAS.

Ashdown—Cotton-oil Mill.—Incorporated: Little River Cotton Oil Co., capital stock \$100,000, with W. Y. Foster, president; W. A. Arthur, vice-president, and Charles McWee, secretary.

Augusta—Cotton-oil Mill.—Enterprise Cotton Oil Co. has organized, with J. L. Conner, president; Minor Gregory, vice-president, and L. E. Bonner, secretary, to build cotton-oil mill; capital stock \$50,000.

Bald Knob—Telephone System.—Bald Knob Telephone Co. has been incorporated, with \$5000 capital, to construct system. E. B. Wynn is president; George Dickey, vice-president, and L. G. Wynn, secretary.

Batavia—Fruit Orchards.—Batavia Fruit Co. has been organized, with capital stock of \$100,000, and will establish fruit orchards. J. H. Vartels of Dewey, I. T., is president.

Batesville—Mercantile.—Incorporated: Barnett Mercantile Co., capital stock \$50,000; J. N. Barnett, president; J. F. Barnett, vice-president; C. A. Barnett, secretary; W. M. Ball, treasurer.

Lincoln—Mercantile.—Incorporated: Lincoln Mercantile Co., capital stock \$15,000, with M. B. Holt, president; C. L. Burns, vice-president; C. W. Bain, secretary; Eugene Kling, treasurer.

Little Rock—Pearl-button Factory.—F. J. Ansted of Dubuque, Iowa, is said to contemplate building pearl-button factory.

Little Rock—Pearl-button Factory.—H. Chalmers & Sons of Amsterdam, New York, contemplate establishing pearl-button factory.

Little Rock—Coal Mines.—Incorporated: Arkansas Anthracite Association, with capital stock of \$100,000, to develop coal mines, deal in timber and mineral lands, construct railroads, etc.; T. D. Kinman, president; Abe Heiligers, vice-president; T. D. Kinman, Jr., secretary.

Longley—Place-Mercantile.—Incorporated: Longley Company, capital \$15,000, with L. Longley, president; R. E. Howard, vice-president; Frank Figures, secretary.

Russellville—Ice and Cold-storage Plant.—Incorporated: Russellville Ice & Cold Storage Co., with capital stock of \$38,250, to build ice and cold-storage plant, etc.; M. R. Craig, president; J. H. Craig, A. Sloyd, R. B. Wilson, L. W. and C. W. Cherry, directors.

Springdale—Dry Goods.—Chartered: Springdale Cash Dry Goods Co., with capital of \$25,000; John H. Myers, president; Peter Graham, Jr., vice-president; C. A. Delts, treasurer.

FLORIDA.

Jacksonville—Lumber.—Joe King, Jr., Company has been organized, with a capital stock of \$300,000, to deal in and manufacture lumber.

Jasper—Land Improvement.—Chartered: Jasper Land Improvement Co., capitalized at \$15,000, by W. F. Horne, W. H. Greene, H. M. Trotton and D. W. Brown.

Jasper—Land Improvement.—Incorporated: Jasper Land & Improvement Co., capital \$15,000, by R. F. Horne, W. H. Green, H. N. Tuten and R. W. Barnes.

Kissimmee—Cattle.—Chartered: Lightsey, Lewis & Caruthers Cattle Co., capital \$45,000, by W. C. Parsons, H. A. Lightsey, W. H. Lewis, Robert Caruthers and R. E. Caruthers.

Miami—Fruits, etc.—Incorporated: Chase & Harney Company, capital \$20,000, by S. L. Chase, W. R. Harney, J. G. Sapelby, A. R. Rogue and Alvin K. McMullen, to handle and raise fruits and vegetables for shipment.

Miami—Fruit-growers.—Incorporated: Chase & Harney Company, with capital of \$20,000, by Sidney O. Chase, W. R. Harney and J. D. Saxelby.

Pensacola—Electric Plant, etc.—City has received plans by Waring, Chapman & Farquhar of New York, together with estimates on sewerage system, street paving and other public improvements. An election will be held to vote on issuing \$100,000 in bonds for this work. Probably an electric-light plant and water-works system will also be given consideration. Address "The Mayor."

St. Augustine—Steam Laundry.—Clayton Simmons of Ypsilanti, Mich., will establish steam laundry. Machinery has been bought.

Tallahassee—Lumber Mill.—Incorporated: McRae Lumber Co., capital \$50,000, by G. L. McRae, Marian Currie and A. B. McRae, to erect saw-mill.

Tallahassee—Lumber Company.—Incorporated: McRae Lumber Co., with capital of \$5000, by G. L. McRae and A. B. McRae.

Tallahassee—Lumber Plant.—It is rumored that Minnesota Lumber Co. of Valdosta, Ga., and other cities has bought 65,000 acres of timber land near Jacksonville, and will build mills.

Tampa—Foundry, etc.—Report of Tampa Foundry & Machine Co. to enlarge, given last week, was not correct.

Tampa—Cigar-box Factory.—D. N. Holway and Thomas Fisher will establish cigar-box factory.

GEORGIA.

Atlanta—Wm. E. Beverly, Wm. R. Chase, Henry P. Burt, Charles E. Benton and Daniel T. Devoll, all of New Bedford, Mass., have organized White Hill Plantation Co., with capital of \$30,000, to cultivate pecans.

Atlanta—Mercantile.—Incorporated: Hayes-Wellborn-Baker Company, capitalized at \$50,000, by D. J. Hayes, J. V. Wellborn, O. A. Baker and T. J. Ripley.

Atlanta—Mercantile.—Incorporated: Daniel Bros., capitalized at \$30,000, by L. D. Daniel, Charles Daniel, J. C. Stanford, J. T. Webb and others.

Atlanta—Dry Goods.—Chartered: Reid Dry Goods Co., capital \$21,500, by George G. Reid, M. W. Reid and W. E. Watson.

Brunswick—Iron Furnaces, Steel Plant, etc. A special dispatch to the Manufacturers' Record reports that J. C. Cromwell of Garrett-Cromwell Engineering Co., Cleveland, Ohio, states his company has contract for surveying site, erecting necessary buildings, furnishing machinery and completing ready for operation the Mohawk Valley Steel & Wire Co.'s proposed iron and steel plant, announced in this department January 23. It is stated the plant will be a 1600-ton iron and steel works and rolling mill, including five 500-ton furnaces. Site of about 500 acres has been secured for the enterprise. Work of construction will begin immediately upon transfer of the land chosen as site. This is

expected to be effected during the present week. The Mohawk Company is capitalized, as previously announced, at \$25,000,000, and will have a bond issuance of \$5,000,000. Frank A. Umsted, president and general manager, is now in New York city closing final negotiations in connection with the plant, and will return to Brunswick next week. Edmund R. Cummings is secretary, and the company's offices at present are given as Worcester, Mass.

Dupont—Turpentine Plant.—F. Dickenson and John Lamb have optioned timber lands with a view to establishing turpentine plant.

East Point—Wagon Works.—White Hickory Wagon Manufacturing Co. will erect two-story building 80x250 feet. A. F. Walker, Atlanta, is preparing plans.

Griffin—Knitting Mill.—Griffin Knitting Mills will erect \$10,000 building for its established plant. Probably additional machinery will be added.

Harmony Grove—Cotton-oil Mill.—W. S. Mize and associates will soon organize company, reported last week, to build cotton-oil mill. Will also erect cotton ginnery.*

Humansville—Water-works.—City contemplates expending about \$100,000 for construction of water-works. Address "The Mayor."

Lafayette—Cotton Mill.—The \$100,000 company mentioned last week expects to organize soon. No details have been decided on. E. Montgomery will be general manager. His address for the present is Summerville, Ga.

La Grange—Electric and Ice Plant.—White & Catlett of Jacksonville, Fla., are interested in erecting the 15-ton ice plant and electric plant recently announced. About \$30,000 will be expended.

Macon—Brewery.—Acme Brewing Co. will enlarge its plant, including erection of nine-story building and installation of another kettle to hold thirty-three barrels, and other equipment. Plans and specifications for building have been obtained.

Moultrie—Lumber Mill.—Southern Lumber Co. has been organized, with A. Huber, president; R. L. Stokes, treasurer, and R. E. Plowden, manager, to build mill.

Moultrie—Saw-mill.—Summer & Pounds Lumber Co. will build saw-mill.

Poulan—Lumber Plant.—Jordan & Co. will establish saw-mill, planing mill and variety works.

Savannah—Knitting Mill.—M. A. Stokes contemplates establishing knitting mill to cost from \$5000 to \$10,000.

Savannah—Rice Mill.—J. H. M. Clinch, Geo. J. Mills, Jos. A. Huger and others have incorporated Planters' Rice Mill Co., with capital stock of \$80,000, and privilege of increase to \$150,000, for milling rice.

Savannah—Crockery.—Incorporated: Savannah Crockery & Hardware Co., capitalized at \$25,000, by Isaac Valensky, Samuel Bernstein and Leo Bernstein.

Stevens Pottery—Electric-light Plant.—Stevens Bros. & Co. contemplate installing an electric-light plant.*

Toccoa—Ice Plant and Oil Mill.—C. L. Mize will organize Farmers' Cottonseed Oil & Fertilizer Co., with capital of \$25,000, to build cotton-oil mill mentioned last week. Will also probably build ice plant.

Tyty—Lumber Plant.—Seymour Lumber Co. of Cordele, Ga., mentioned last week, will build two saw-mills, capacity about 25,000 feet per day, also planing mill to dress product of the saw-mills.*

Valdosta—Trousers Factory.—Valdosta Mercantile Co. will establish trousers factory. Machinery has been purchased.

Valdosta—Cigar Factory.—Incorporated: Rodrigues Cigarro Compania, with capital stock of \$10,000, for manufacturing cigars, by Seaton R. Jones, W. P. Dorrough, M. R. Ousley and others.

Valdosta—Fuller's-earth Developments.—J. F. Bailey contemplates developing fuller's-earth deposit said to have a very light overburden.

Valdosta—Organ Factory.—Carter & Dorrough contemplate manufacturing house organs in the future.

Waycross—Car Works.—Endeavors are being made to organize company for establishing the car works recently mentioned as proposed. F. M. Hawkins and J. L. Sweet are interested.

KENTUCKY.

Beattyville—Coal Lands, etc.—Incorporated: Elk Lick Land & Coal Co., with \$10,

100 capital, by G. W. Gourley, B. McGuire and J. Brandenburg.

Bowling Green—Telephone System.—Independent Telephone Co., now installing system, has incorporated, with capital stock of \$100,000. Nerge Clark, E. H. Stout, J. W. Potter and W. B. Hayes are directors; also A. C. Wilkerson of Huntington, Ind.

Frankfort—Gas and Oil Wells.—Incorporated: Farmers' Oil, Gas, Petroleum & Mineral Co., \$10,000 capital, by J. F. Cecil, O. P. Carter and J. H. Ferguson.

Guthrie—Coal Land.—John W. Staples of Harriman, Tenn., is preparing to develop coal lands.

Kentucky—Oil Wells.—J. H. Adams of Cumberland, Tenn., is interested with Canadian capitalists in forming Ontario Oil Co. to develop oil lands in Kentucky.

Lexington—Oil Wells.—Empire Oil Co. is increasing its capital stock from \$25,000 to \$50,000.

Lexington—Townships.—Incorporated: Kentucky, Oklahoma, Indian Territory & Adjacent States Land & Townsite Co., capital stock \$40,000, by Julius Edwin Wright of Mt. Sterling, Ky.; W. S. Hays and C. F. Oney, Lexington; Amos Price Jones, Burgin, and Leonidas Robinson.

Louisville—Mercantile.—Incorporated: Loevenhart & Co., with \$60,000 capital stock, by Leo Loevenhart and Henry and Simon Lieberman.

Louisville—Architectural Iron Works.—Sneel Architectural Iron Works has purchased site at \$20,000, and will construct an entirely new plant, modern in every particular. About \$50,000 will be expended. Bernard Selligman is president.

Middlesboro—Coal and Timber Lands.—Bell County Coke & Improvement Co., reported last week, has purchased 1000 acres of coal and timber land, and expects to develop same in the near future. R. C. Ford is secretary.

Paducah—Curtain-pole Factory.—Chartered: Paducah Curtain Pole Co., with \$10,000 capital, by F. E. Lack, E. P. Gilson and W. F. Paxton.

Paducah—Marine Railway.—Ed. Howard and W. W. Hazard of Cleveland, Ohio, representing American Rivers Shipbuilding & Repairing Co. of Chicago, capitalized at \$5,000,000, are reported as negotiating for the Paducah Marine Railway.

Paducah—Iron Furnace.—Kentucky Iron Co. has blown in its furnace, and is reported as contemplating the erection of another furnace. It also contemplates building coke ovens.

Princeton—Mineral Developments.—Chartered: Princeton Mineral Co., with \$60,000 capital, by C. C. Larkins, J. W. Hollowell and F. T. Satterfield, to mine lead, zinc and spar.

LOUISIANA.

Abbeville—Brick Works.—Incorporated: Caldwell-Godechaux Brick Co., capitalized at \$25,000, for manufacturing bricks; G. Godechaux, president; S. Caldwell, vice-president, and F. H. Godechaux, secretary.

Alexandria—Electric Plant.—D. C. Williams of Chicago, represented by William Polk of Alexandria, has asked for franchise to construct electric plant for furnishing light, heat and power.

Baton Rouge—Cannery.—R. M. Ross, R. J. Hummel and J. Lester Williams are organizing \$10,000 company to establish cannery.

Deridder—Lumber Plant.—Stephenson Bros. of Saginaw, Mich., will build lumber plant of 150,000 feet daily capacity. They will cut 60,000 acres of timber land previously purchased.

Gretna—Electric and Ice Plant.—New Orleans and Gretna parties will build ice plant of twenty-five tons daily capacity and an electric-light plant. Interested parties not willing to announce names as yet.

Gretna—Soap Factory.—Union Oil Co. will install equipment for manufacturing soap by a new process. The machinery has been purchased.

Jennings—Machine Works.—Louisiana Machine & Well Works Co. has organized as Oil City Iron Works Co., Limited, capitalized at \$25,000; H. K. Midkiff, president; Ben Freeman, vice-president, and S. H. Koughan, manager. Company will add machinery for oil-well drilling.

Mansfield—Coal and Iron Mines.—Joseph R. Brown, C. E. Jenkins, William Goss, Miss Belle Taylor and others have incorporated Dolet Coal, Iron & Mineral Co. to develop coal, iron and other minerals on 20,000 acres of land. Capital stock is \$200,000.

Monroe—Lumber Plant.—Acadian Lumber Co. has been incorporated, with capital stock of \$100,000, purchased seventy acres of timber land in Louisiana and 67,000 acres in Florida,

and will build mills; Fred Wright, president; G. B. Haynes, vice-president; N. C. Washburn, general manager, all of Monroe, and S. O. Shattuck of Lake Charles, La., secretary.

New Orleans—Timber Land.—Huttig-Moss Lumber Co. of St. Joseph, Mo., has bought 22,000 acres of cypress land at about \$1,000,000.

New Orleans—Stockyards.—Union Stockyard Co., Ltd., has been incorporated, with capital stock of \$100,000, to operate stockyard, abattoir, etc. Joseph Maunus is president; Charles H. Crowley, vice-president, and Jas. L. Lemarie, secretary.

New Orleans—Steamship Line.—James McNaught and Alexander Hollander of New York city and C. C. and C. R. Mengel of Louisville, Ky., will organize Guant-mala Northern Steamship Line, with capital stock of \$800,000, to establish steamship lines between Puerto Barrios and either Pensacola or New Orleans.

New Orleans—Lumber Plant.—Lacombe Land & Lumber Co., Ltd., reported last week with \$10,000 capital, has let contract for plant of 30,000 feet capacity daily. Joseph P. Florio is president.

New Orleans—Western Union Telegraph Co. plans the expenditure of about \$1,500,000 for various improvements and extensions, especially in connection with the Illinois Central Railway, doubling its track to Memphis; T. P. Cummings, manager of local office; C. H. Briston, general superintendent of construction, offices in New York city.

Vidalia—Ice Plant.—Concordia Oil Co. has let contract for establishment of 20-ton ice plant.

Washington—Water-works.—City contemplates constructing water-works, and Ira W. Sylvester of Alexandria, La., is to prepare plans and specifications. Address "The Mayor."

MARYLAND.

Annapolis—Cannery.—Henry B. Meyers, Joseph Trautwein and others are organizing company to establish cannery.

Baltimore—Door and Sash Factory.—It is reported that Cypress Lumber Co. of Apalachicola, Fla., will build sash and door factory.

Baltimore—Packing Plant.—Miller & Co. have let contract to J. & S. H. Lamb for erection of packing-house 4x80 feet, two stories, to cost \$7500.

Baltimore—Electric-light Company.—S. Kann, Sons & Co., South Broadway, contemplate installing \$20,000 electric-light plant for department store. Adams & Schwab are reported to be the engineers in charge.

Baltimore—Machine Works.—Incorporated: Aumen Machinery & Supply Co., for the manufacture of machinery and machinists' supplies, by William S. Aumen, Joseph G. Coale, W. Claude Chapman, William J. O'Brien, Jr., and Wm. F. C. Gerhardt. The capital stock is \$25,000.

Baltimore—Chemicals.—Incorporated: Justins Chemical & Toilet Co., for dealing in drugs, patent medicines and toilet articles, by John Moelter, Paul R. Buchal, Balthasar Moelter, George J. Barkman and George W. Barkman. The capital is \$3000.

Baltimore—Furniture Factory.—Rivers Furniture Co. will build an additional factory, building to be about 150x250 feet; offices at 624 West Pratt street.

Baltimore—Gas Plant.—Consolidated Gas Co. has received plans for proposed extensive improvements recently mentioned to combine its three large plants at cost of about \$300,000. Gas-generating house will be erected, three stories, 77x167 feet, to cost \$25,000. Gas-purifying house will be of brick, steel and iron, slate roof, 87x148 feet, to cost \$40,000. John Waters has contract to erect buildings. New plant completed will produce 20,000,000 cubic feet of gas per twenty-four hours.

Eastport—Cannery.—A \$4000 cannery will be established. Address Business Men's Association.

Federalburg—Electric-light Plant.—John F. Disharoon contemplates establishing electric-light plant.

Laurel—Ice Plant.—Fred. L. Flester will erect ice plant of twenty-five tons capacity daily.

Leonardtown—Cannery.—John S. Hebb of Baltimore, Md., will establish cannery.

Salisbury—Lumber Plant.—E. S. Adkins Company has incorporated to erect another large planing and box mill 60x160 feet. This mill will be used exclusively for box and shock business, and present mill will be turned into plant for manufacture of inside finish, cabinet mantels, etc. Contract has been closed. About \$10,000 will be invested.

Salisbury—Foundry and Machine Shop.—Incorporated: Gunby Manufacturing Co., to

construct machine shop and foundry. The capital stock is \$150,000; incorporators, L. W. Gunby, president and general manager; Graham Gunby, Edward C. Gunby, Frederick L. Smith, Donald Graham, Frank M. Gunby and Jas. T. Malone.*

Sudlersville—Cannery.—Spencer Wells, William Anderson and John E. George will establish cannery.

MISSISSIPPI.

Aberdeen—Trousers Factory.—Geo. T. Rather proposes organizing company, capitalized at \$75,000, for manufacturing trousers or suits of cassimere, serge, jeans, etc., and possibly men's shirts. Endeavors are being made to interest outside capital.

Carrollton—Ice Plant.—Seventh District Ice Manufacturing Co. will be organized, with Jacob Nienaber, president; Joseph Miller, vice-president; Michael De Lucas, secretary, and William Schroeder, treasurer, to build ice plant. Capital is \$30,000.

Carrollton—Electric-light Plant.—Carrollton Electric Co., reported last week with \$10,000 capital, will build electric plant. John Martin of the company will construct the plant.

Gulfport—Steel Bridges.—Gulf & Ship Island Railroad has had detailed plans drawn for construction of four metal bridges; S. S. Bullis, president.

Holly Springs—Sewerage System.—Town contemplates establishing a sewerage system. Address "Town Clerk."

Jackson—Electric-light Plant.—T. McClelland proposes organizing company to establish \$25,000 electric plant.

Jackson—Steam Laundry.—Incorporated: Jackson Steam Laundry & Bath Co., capitalized at \$20,000, by P. E. Quin, Louis Bendat and their associates.

Meridian—Drugs.—Incorporated: Josh F. Moore Drug Co., capital stock \$50,000, by Josh F. Moore, C. M. Haarnon, C. B. Moody, Jr., and others.

New Albany—Cotton-oil Mill.—Paul J. Rainey, R. F. Tate and others will build cotton-oil mill.

Sardis—Electric-light Plant.—B. L. Rush of Batesville, Miss., will establish electric-light plant.

Speeds—Water Supply, etc.—The village will issue bonds to establish water plant and connect with the Vicksburg water-works system; will also equip a fire department. Address "Village Clerk."

MISSOURI.

Kansas City—Coal Mines.—United States Coal & Mining Co., reported last week with capital of \$250,000, will develop several large mines in Adair county. R. B. Carver is chief engineer.

St. Joseph—Foundry.—G. D. Berry has bought, will enlarge and operate Columbia Foundry.

St. Louis—Mining, etc.—Jefferson County Mining & Milling Co. will increase capital from \$15,000 to \$50,000.

St. Louis—Hats.—Incorporated: Harris-Polk Hat Co., with capital of \$100,000, by Tyre C. Harris, James W. Harris, Julius Polk, William G. Eversole and Julius F. Zetzsche.

St. Louis—Shoe Company.—Incorporated: Koers-Laughlin Shoe Co., with capital of \$21,000, by Frank Koers, Theodore F. Koers and John B. Laughlin.

St. Louis—Electrical Construction.—Chartered: Metropolitan Bureau Electrical & Mechanical Maintenance Co., with capital of \$50,000, by Samuel Barnes, B. C. Seaton and W. F. Seaton, for electrical construction; offices, 306 Carleton Building.

St. Louis—Chemical Manufacturing.—Incorporated: Midland Chemical & Manufacturing Co., capital \$3000, by Fred H. Semple, Charles A. Rausher, W. J. Buchanan, W. A. Hogan and Oscar Heimann.

St. Louis—Grain Company.—Pontiac Grain & Investment Co. has been incorporated, with capital of \$20,000, by Charles H. Cluff, William H. Alecock, Charles A. Powers, A. D. Lorimer and Percy R. Lemman.

St. Louis—Grease Works.—Incorporated: American Rendering Co., capital \$3000, by George W. Huselson, O. W. Pratt, Thomas R. Marks and G. J. Mesereau, to render animal fats into grease.

St. Louis—Chartered: E. J. O'Brien-De Linter Company, with capital of \$200,000, by Edward J. O'Brien, William C. Essmuller and Aurora A. O'Brien.

St. Louis—Transfer Company.—Incorporated: Rhodes Transfer Co., with capital of \$40,000, by George S. Rhodes, Emil Hitz and William W. Charney.

St. Louis—Tobacco.—Incorporated: Colonial Leaf Tobacco Co., capital \$16,000, by R.

E. M. Blair, Amadee V. Reyburn, A. V. Reyburn, Jr., J. E. M. Walker and E. C. Bennett, Jr.

NORTH CAROLINA.

Albemarle—Cotton Mills.—Edrd Manufacturing Co. will install additional machinery; now has 20,000 spindles.

Albemarle—Wiscasset Mills Co. has voted the \$150,000 of additional capital recently referred to, and will establish knitting mill. Company will acquire Windemere Knitting Mills and install that equipment in new building, together with other new knitting machinery.

Boyer—Copper Mines.—Chartered: Western North Carolina Mining & Developing Co., to develop the "Native Copper and Lead Mines" owned by N. R. Williams, the strata being said in the articles of agreement to be 700 feet long and 200 feet wide. The capital stock is \$25,000.

Charlotte—Water-works Improvements.—City contemplates expending \$200,000 to improve its water-works. Address "The Mayor."

Council—Tool Works.—A. G. Holmes and A. A. Park have incorporated Holmes Tool Co. for manufacturing files, dipper cutters and other tools; capital \$20,000.

Dunn—Table Factory.—A \$5000 company is being organized to establish table factory.

Elizabeth City—Lumber Company.—Incorporated: Knobb's Creek Lumber Co., by W. Lynch of Walkertown, Va.; W. C. Powell of Norfolk, Va.; C. D. Bundy, H. T. Greenleaf, C. W. Hollowell and S. S. Hardison of Elizabeth City. The authorized capital is \$25,000.

Hickory—Electric-light Plant.—Marcellus E. Thornton, A. A. Shuford and others have incorporated Thornton Light & Power Co., with capital stock of \$50,000. They will enlarge present plant, extending the system to admit of supplying residences, also increasing city lamps to thirty from nineteen. Temporary improvements will be made while a new power-house is being erected. Installation of ice and cold-storage plant is also contemplated; H. C. Tucker and W. J. Kennedy, engineers in charge. Address Marcellus E. Thornton.*

High Point—Electric-power Plant.—High Point Electric Power Co., reported incorporated last week, has elected W. S. Thomson of Greensboro, N. C., president, and O. N. Richardson of High Point, secretary. Authorized capital is \$50,000, which will be paid in as needed. Company has a 300-horse-power plant complete, and has ordered additional machinery, including 650-horse-power engine, four generators of 166 horse-power each, two small generators, etc.

Jamestown—Cotton Mill.—Oakdale Cotton Mills contemplates building an additional plant. Company has 5344 spindles.

Kinston—Lumber Company.—Hines Bros. Lumber Co. increases capital from \$50,000 to \$100,000.

Lexington—Lounge Factory.—L. J. Peacock, J. W. Crowell, D. F. Coucl and E. J. Richardson have incorporated Lexington Upholstering Co., with capital of \$25,000, to establish lounge factory.

Lincolnton—Cotton Mill.—J. A. Abernethy will, as reported last week, arrange to build cotton mill. Equipment will be 10,000 spindles for manufacturing yarns; steam-power, 400 horse-power, will be used. D. A. Tompkins Co. of Charlotte, N. C., is engineer in charge.

Lumbardale—Lumber Plant.—W. H. Britton & Co. of Timberland, N. C., is enlarging their plant at Lumbardale, increasing capacity from about 50,000 to 100,000 feet of lumber daily. (This plant was erroneously referred to last week under Timberland as being rebuilt after fire.)*

Newton—Knitting Mill.—Newton Hosiery Mills will install additional machinery, increasing output from 900 dozen to 1000 dozen pairs.

Salisbury—Cotton Mill.—Kosler Manufacturing Co. has purchased additional building, and will install 5500 spindles.

Statesville—Furniture Factory.—Imperial Manufacturing Co., reported last week, has elected J. C. Steele, president; W. D. Turner, vice-president, and D. A. Miller, secretary. Plant for manufacturing furniture will be erected and equipped at once; capital \$30,000.

Taylorsville—Woodworking Plant.—J. A. Cline of Charlotte, N. C., contemplates establishing woodworking plant.

Wilmington—Underwear Factory.—Chas. D. Parsley contemplates establishing plant for manufacturing shirts, drawers, overalls, pajama suits, etc.*

SOUTH CAROLINA.

Charleston—Fuel.—Incorporated: Benjamin Wood Co., to deal in wood for fuel purposes. The capital will be \$2000. R. W. Molloy, G.

W. Benjamin and J. A. Livingston are incorporators.

Charleston—Cigar-box Factory.—American Cigar Co., general office in New York, will establish cigar box factory.

Columbia—Woodworking Plant.—Thos. H. Ryan & Co. will build woodworking plant; will manufacture bank and office fixtures and interior finish.

Dillon—Cotton Mill.—W. M. Hamer, G. D. Barlow, A. J. C. Cottingham and others have incorporated Maple Cotton Mills, with capital stock of \$100,000, to build plant.

Dillon—Cotton Mill.—R. P. Hamer, Jr., W. M. Hamer, D. M. Carmichael and Allen Edens have incorporated Hamer Cotton Mills, with capital stock of \$100,000, to build plant.

Georgetown—Chemical Works.—Seaboard Product Co. has been incorporated, with a capital stock of \$100,000, by Plainfield (N. J.) and New York parties, to establish the chemical works reported last week.

Georgetown—Woodworking Plant.—Fitzgibbon & Co. of Saranac, Mich., and Statesville, N. C., will establish the woodworking plant reported last week.

Goldville—Cotton Mill.—L. W. C. Blalock of Goldville, George Johnstone of Newberry, S. C.; W. G. Childs and W. H. Lyles of Columbia, S. C., have incorporated Banna Cotton Mills, with capital of \$100,000.

Gouldins—Mercantile.—H. P. Brown and J. C. Graham have incorporated Gouldin Mercantile Co., with capital of \$5000.

Greenville—Railway-signal Works.—F. F. Capers and W. G. Sirrine have incorporated Harris Manufacturing Co. to manufacture steam valves, railway signals, etc. Capital stock is \$12,000.

Greenville—Sewerage System.—City will make extensions to its sewerage system.

Laurens—Mercantile.—Fuller-Darlington Company has been incorporated, with T. D. Darlington, president, and Brooks Swygert, secretary.

Laurens—Cotton Mill.—Watts Mills, reported several months ago, will install 30,000 spindles and 700 looms, instead of the 15,000 spindles and 500 looms previously announced. J. E. Sirrine of Greenville, S. C., is engineer in charge. Contract let for building, and all machinery purchased.

St. Georges—Telephone Equipment.—Chartered: St. Georges Telephone Exchange, to maintain system of telephones. The capital is \$5000. The incorporators are R. L. Weeks, M. S. Connor and D. S. Dukes.

Summerville—Ice Plant.—Incorporated: Summerville Ice & Cold Storage Co., capitalized at \$30,000, with Milton P. Skinner, president, and C. G. Huntington, secretary.

Walhalla—Cotton Mill.—Walhalla Cotton Mills will add 5000 spindles and 175 looms. Machinery has been purchased. Now has 10,000 spindles and 320 looms.

TENNESSEE.

Adams—Mill and Gin.—Incorporated: Farmers' Mill & Gin Co., capital stock \$20,000, by W. S. Crockett, C. H. Conley, J. F. Paul, J. J. Tatum and J. M. Daniels, to manufacture flour, meal and cereals.

Bristol—Cannery.—N. H. Anderson contemplates establishing cannery. Address care M. B. Ambler & Co., 115 Moore street.

Camden—Stave Mill.—L. N. Lanier, Thos. Dodd, James H. Witfield and W. F. Harrison have organized \$24,000 company to erect stave mill.

Chattanooga—Cotton-oil Mill.—W. D. Roberts, F. M. Hutchinson, H. Bond, A. W. Chambliss and J. W. Llewellyn have incorporated Continental Cotton Oil Co. for the manufacture of cottonseed oil. Capital stock is \$50,000.

Chattanooga—Flour Works.—Sanders Flour Co. will build an addition—a foundry 80x100 feet in size. New machinery will be installed.

Harriman—Coal and Timber Developments, United States Realty Co. is preparing to develop coal and timber land.

Harriman—Coal Lands.—Brier Creek Coal Co. is preparing to develop its coal land.

Knoxville—Trunk Factory.—Whitely-Spence Trunk Co. has leased additional building, and will install machinery to increase output.

Knoxville—Dyeing Plant.—A. Schonbrunn, reported last week as building dyeing plant, will operate as Schonbrunn's Dye Works; building to be of brick, 48x54 feet, two stories, costing \$5500; Bauman Bros., architects; S. A. Garland, contractor for brickwork, and Cooley Bros. for woodwork.

Knoxville—Coal Mining, etc.—Chartered: Consolidated Coal & Coke Co., capital stock \$20,000, by J. G. Howell, George C. Heck, William S. Shields, Arthur Groves and Ed-

ward T. Sanford, for mining coal and manufacturing coke.

Madisonville—Knitting Mill.—W. H. Magill, F. E. H. McCroskey, G. O. Bicknell, R. C. Kefauver and M. G. Wright have incorporated Madisonville Knitting Mills to establish plant. Capital is \$25,000.

Memphis—Hat Factory.—H. Rosenthal, J. Newman, C. Wagner, H. Wagner and H. F. Bush have incorporated Rosenthal-Wagner Hat & Cap Manufacturing Co., with capital of \$5000.

Memphis—Telephone System.—Southwestern Telephone & Telegraph Co. will extend its line to Hoxie, Ark., about ninety miles distant. A. S. Chalfant of Little Rock, Ark., is general foreman of construction.

Memphis—Lumber.—Incorporated: Hastings Lumber Co., capital \$2500, by E. M. Richardson, R. B. Hastings, William Pritchard, R. C. Montgomery and K. D. McKellar.

Memphis—Shipbuilding Plant.—Bart E. Linehan, president Linehan Railway Transfer Co. of Dubuque, Iowa, proposes organizing \$100,000 stock company to build shipbuilding and repair plant, and in the future a drydock.

Memphis—Soap Factory.—Anti-Board Soap Co., whose plant was destroyed by fire last year, is being reorganized to construct new factory. Product will be laundry soap. Address care of "The Industrial League."

Memphis—Warehouse Company.—Incorporated: Central Warehouse Co., capital stock \$12,000, by T. B. Jones, V. L. Rogers, C. B. Jones, J. T. Frost and Hosmer J. Barrett.

Memphis—Improvement Company.—Incorporated: Southern Improvement Co., capital \$5000, by W. A. Bickford, W. G. Wilkins, W. J. Chase, F. I. Renner and G. C. Price.

Memphis—Cotton-oil Mills.—Phoenix Cotton Oil Co. will increase capital stock from \$50,000 to \$200,000.

Mountain City—Telephone System.—T. P. Crow will organize company to build telephone line from Mountain City to Bristol. About \$2000 will be expended.

Nashville—Dental Company.—Incorporated: Dismukes Blakemore Dental Co., capital \$5000, by W. L. Dismukes, E. W. Blakemore, E. C. Faircloth, J. G. Kirkpatrick and Jos. W. Byrns.

Nashville—Pottery.—Harley Pottery Co., reported last week with \$10,000 capital, will build plant for manufacturing jugs, jars, churns, etc.; offices at 317 Brook street.*

Nashville—Dry Goods.—Chartered: Roberts-Buford Dry Goods Co., with capital of \$22,000, by Lestel W. Buford, G. R. Buford, W. W. Faw, Hayden Tansil and J. R. Roberts.

Nashville—Furniture Factory.—Montgomery Furniture Co. will enlarge its furniture factory.

Nashville—Furniture Factory.—W. D. Hamilton Company will build furniture factory building; will be two stories high, 42x75 feet.

Nashville—Furniture Factory.—Greenfield-Talbot Company will build furniture factory.

Nashville—Drugs.—Incorporated: Fortune-Ward Drug Co., by T. P. Fortune, Frank C. Huse, S. M. Benton, Ben L. Fortune and Frances W. Ward; capital \$20,000.

Petros—Coal Mines, etc.—Big Brushy Coal & Coke Co., recently chartered, has a paid-up capital of \$200,000, and will succeed to the business of Crooked Fork Coal & Coke Co. and take over additional properties.

Ripley—Cotton Compress and Gin.—R. W. Burks, A. A. Young, Thomas Steele, W. G. L. Wright and R. A. Williams have incorporated Lauderdale County Gin & Seed Co. to build cotton gin and both square and round bale compresses. Capital is \$6000.

Waldensia—Coal Mines and Coke Ovens, Chicago-Tennessee Coal & Coke Co., recently mentioned, has about 9000 acres of coal land. A mine has been opened on slope and about 150 tons daily is the output. Sixty coke ovens have been completed; erection of sixty more is about to begin, and a third battery of sixty will be erected later on. David S. McMullen, president, has charge of the developments; offices at No. 125 La Salle street, Chicago.

TEXAS.

Abilene—Mercantile.—Incorporated: Watson-Russell Company, capital \$25,000, by A. E. Watson, W. T. Russell and R. W. Ellis.

Beaumont—Cycles.—Incorporated: Beaumont Cycle & Auto Co., capital stock \$10,000, by E. L. Rollins, H. B. Ford and J. S. Rollins.

Brownwood—Electric Plant.—Chartered: Boyson Light & Power Co., capital stock \$30,000, by S. R. Coggin, B. S. Boyson, Henry Ford and G. N. Harrison, all of Brownwood.

Cleburne—Telephone System.—Cleburne Telephone Co., reported last week with \$60,

000 capital, will construct system; Jones & Winter, 1259 Monadnock Building, Chicago, engineers in charge. F. B. McElroy, 112 West Ninth street, Fort Worth, Texas, is the organizer.*

Dallas—Cattle.—Incorporated: Dale-Lanes Cattle Co., capital stock \$300,000, by J. B. Dale, Sr., J. T. Dale and B. A. McKinney of Fannin county, J. B. Dale, Jr., of Hunt county, and J. E. Dale of Clay county.

Dallas—Printing Plant.—Incorporated: Johnson-Buckner Company, capital \$10,000, by W. L. Johnson, M. L. Buckner and T. M. Robinson.

Deepwater—Irrigation Canal.—Incorporated: Deepwater Canal Co., capital stock \$10,000, by J. E. Ross, W. E. Jones and Jesse H. Jones.

Denison—Electric-light Plant.—Denison Light & Power Co. will build another electric-light plant; buildings, two in number, to be 60x50 feet each. About \$40,000 will be expended.

El Paso—Publishing.—Incorporated: El Paso News, capital stock \$20,000, by C. W. Kindrick, W. A. Thorp and J. A. Doolittle.

Ennis—Telephone System.—Chartered: Central Toll Line Telephone Co., capital stock \$30,000, by W. L. Harper, Chas. Phippen, Tom Schaffer of Ennis, A. E. Schaffer, H. Goecke and G. A. Hoskins of Yapokoneta, Ohio.

Ennis—Cotton Mills.—A. M. Hatcher of Houston, Texas, has made proposition for establishment of a cotton mill. J. B. Armstrong, W. L. Harper, J. W. Story and others will endeavor to meet the proposition.

Fort Worth—Match Factory.—Board of Trade is closing negotiations for establishment of \$100,000 match factory.

Fort Worth—Mercantile.—Incorporated: M. E. Singleton Company, capital \$4000, by M. E. Singleton, J. A. Coner and W. H. Hortenstein.

Gainesville—Telephone System.—Gainesville Telephone Co., reported last week with \$100,000 capital, has engaged Jones & Winter, 1259 Monadnock Building, Chicago, Ill., as engineers in charge of construction. F. B. McElroy, 112 West Ninth street, Fort Worth, Texas, is the organizer.*

Garrison—Mercantile.—Incorporated: Dotson, Kelly & Co., capital stock \$40,000, by E. M. Dotson, J. A. Kelly, O. C. Dotson, John F. Adams and others.

Houston—Camel's-hair Mill.—Oriental Textile Co. has increased capital from \$50,000 to \$100,000 in order to double its mill.

Houston—Photographs.—Incorporated: Hitcher Photo Company, capital \$10,000, by A. H. Hitcher, John D. Roberts and Ingham S. Roberts.

Llano—Manufacturing, etc.—Incorporated: Llano Milling & Manufacturing Co., capital stock \$30,000, by W. W. Canine, A. A. Lange, R. H. Lansing and W. J. Moore.

Marlin—Cotton Mill.—A. M. Hatcher of Houston, Texas, has submitted proposition to Marlin Business League for establishment of \$250,000 cotton mill.

Mart—Railroad Shops.—International & Great Northern Railway will establish shops for the Fort Worth division; Leroy Trice, general manager, Palestine, Texas.

Nacogdoches—Painting Company.—Incorporated: Nacogdoches Painting Co., capital \$20,000, by R. U. Halton, A. F. Henning and Giles M. Halton.

Paris—Tailoring.—Chartered: Modern Tailoring & Furnishing Co., capital stock \$2500, by Minnie Friedlander, Gus Friedlander, W. H. Box and G. Gold.

Reagan—Mercantile.—Incorporated: Reagan Mercantile Co., capital \$10,000, by H. T. Rogers, S. D. Davison, A. W. Fliem and others.

Royse City—Mercantile.—Incorporated: Royse City Mercantile Co., capital stock \$20,000, by G. C. Burks, E. L. Burks and R. A. Norton.

San Angelo—Mercantile.—Incorporated: C. & G. Hagelstein Company, capital stock \$50,000, by George H., Chris F. and John M. Hagelstein.

San Antonio—Lumber Plant.—Incorporated: Alamo Lumber Co., capital stock \$300,000, by Sam V. Houston of Floresville, Texas; G. A. Duscumb, William Negley and G. C. Vaughan, San Antonio.

Smithville—Sewerage System.—Smithville Sewerage Co., reported last week, has engaged Wm. B. Brush of Austin and Smithville as engineer in charge of constructing system. Work will be done by day labor. E. Duesher is general manager.

Sour Lake—Oil Refinery.—C. F. Theile, Horner E. Smith and George A. Hill, all of Beaumont, Texas, contemplate building oil refinery.

Stockdale—Mercantile.—Incorporated: Wheeler-Covington Company, capital stock \$25,000, by B. M. Covington, L. R. Wheeler of Stockdale and H. C. King of San Antonio, Texas.

Waxahachie—Electric-light Plant.—City contemplates establishment of electric-light plant to cost \$7000. Address "The Mayor."

Whitesboro—Mercantile.—Incorporated: Abney-Marshall Company, capital stock \$50,000, by P. C. Abney, John Marshall, W. H. Marshall and J. E. Abney.

VIRGINIA.

Bassett—Furniture Factory.—Bassett Furniture Co. has been chartered, with a capital of \$25,000, to establish factory. J. D. Bassett is president.

Belle-Hampton—Coal Mines.—Belle-Hampton Coal Mining Co. has been incorporated, with capital stock of \$200,000, and will develop 4000 acres of coal land. Clifford A. Felton is president; Wm. F. Place, vice-president; Frank S. Bump, secretary, and Harriess W. Edison, treasurer, all of Blughamton, N. Y., and office is at 238 O'Neil Building, that city.

Chase City—Timber Land.—Ohio lumber manufacturers have purchased from W. W. Vales about 1100 acres of timber land for \$5500.

Chase City—Broom Factory.—J. L. Devin is organizing company to establish broom factory.*

Finca—Cannery.—J. D. Hilton contemplates establishing cannery.

Fredericksburg—Saw-mills.—J. B. Mattingly of La Plata, Md., has purchased timber land, and will build several saw-mills.

Lee Hall—Cannery.—H. M. Clemens' cannery, reported last week, will have capacity of 10,000 to 15,000 cases per season.

Lynchburg—Dry Goods.—Chartered: D. Moses & Co., capital stock \$30,000; D. Moses, president; J. E. Gutman, secretary.

Lynchburg—Water-power Development.—Lynchburg Water Power Co. has let contract at \$3,000 to Geo. O. Tenney of Spartanburg, S. C., for development of water-power on James river.

Luray—Cannery.—F. W. Weaver, Wm. M. Rosser, W. H. Griffith and F. W. Jones have formed Luray Cannery Co. to establish cannery.

Mathews—Lumber Plant.—Haines & Summers have sold site to Salisbury (Md.) manufacturers, who will erect lumber plant.

Moback—Cannery.—W. F. Davis, O. O. Rhea and others will establish cannery.

Norfolk—Coal Lands.—N. Monsarrat, president Hocking Valley Railway, Columbus, Ohio, states there is no truth in report mentioned last week that his company bought 250,000 acres of coal land in Buchanan county.

Norfolk—Timber Lands.—John L. Roper Lumber Co. has purchased an extensive tract of timber land, as announced last week, but has no intention of erecting mills, as was stated. Its purpose is to cut the timber at some time in the future and bring it to the mills at Norfolk for manufacturing.

Norfolk—Cement Works.—American Cement Co., 22 South Fifteenth street, Philadelphia, contemplates establishing works referred to last week.

Onancock—Telephone System.—Diamond State Telephone Co. will expend \$150,000 to improve its system.

Petersburg—Cannery.—Appomattox Cannery Co. has been organized to establish cannery and can factory, with N. T. Patterson, secretary. Capital stock is \$5000, with privilege of increasing to \$50,000.*

Petersburg—Manufacturing, etc.—Stratton & Bragg Company, reported last week with \$100,000 capital, will deal in hardware, machinery, mill supplies, etc. It also contemplates manufacturing certain goods mentioned in its charter.

Portsmouth—Dairy.—Riverview Dairy Co., recently chartered, will expend about \$25,000 for improvements to its plant.

Richmond—Tobacco Stemming.—I. N. Vaughan & Co. will rebuild tobacco stemming recently burned; cost will be \$10,000.

Richmond—Electric Plant.—Virginia Passenger & Power Co. will enlarge its plant, increasing horse-power from 4000 to 10,000. About \$100,000 will be expended, and a portion of the work had been completed previous to recent sale of the railway properties. It is stated the machinery has been ordered. Additional building alone will cost \$30,000.

Richmond—Shipbuilding Plant.—Creditors of the Wm. R. Trigg Company have agreed upon plans for reorganization and resuming operations at the plant. Lilburn T. Myers is receiver.

Salem—Woodworking Plant.—J. L. Cronise of Botetourt contemplates establishing woodworking and lumber plant. Address care W. N. Cronise at Salem.

Salem—Cannery.—G. W. Lyman of Amsterdam, Va., contemplates establishing branch cannery.

Wenonah—Coal Mines and Coke Ovens.—Wenonah Coal & Coke Co., mentioned last week, has leased for development 1500 acres of coal land, and within two years will expend about \$50,000, erecting plant which will improve coke ovens, etc. D. H. Barger of Shawsville, Va., is general manager.

West Point—Excelsior Factory.—E. S. Adkins Lumber Co. will build an excelsior factory.

Williamsburg—Cannery.—J. B. Spencer and John S. Charles are said to be promoting the establishment of a cannery.

Williamsburg—Water-works.—Construction of municipal water-works is talked of. "The Mayor" can give information.

Yorktown—Steam Ferry.—Charles Gallagher will establish steam ferry.

WEST VIRGINIA.

Belva—Coal Mines and Coke Ovens.—National Coal & Coke Co., reported last week as composed of Mt. Carmel (Pa.) parties, has elected G. L. Robertson, president; J. H. Reed, vice-president, and W. W. Robertson, secretary, all of Mt. Carmel. Clark & Krebs of Kanawha Falls, W. Va., are engineers-architects for plant, including tipple, chutes, etc., to cost about \$25,000. The coal will be hauled and mined by electricity. Charles Jasper is general manager at Belva.

Charleston—Gas-pipe Lines.—It is stated that People's Natural Gas Co. of Pittsburgh, Pa., will construct 20-inch pipe lines into West Virginia territory from Pittsburgh, connecting with territory controlled by Standard Oil Co. of New York.

Charleston—Coal Mines.—Incorporated: Republic Coal Co., capital stock \$100,000, by V. L. Black, John Wehrle, S. P. Richardson, E. W. Knight and J. C. Malone.

Charleston—Grocery.—Chartered: Hubbard-Bedell Grocery Co., capital stock \$100,000, by J. W. Hubbard, J. F. Bedell, J. M. Staehlin, Carrie S. Hubbard and Cora K. Bedell.

Charleston—Realty.—Chartered: Robson Realty Co., capitalized at \$50,000, by Houghton Robson, A. M. Pritchard and others.

Charleston—Printing Machinery.—International Printing Machinery Co. has been incorporated, with capital stock of \$1,000,000, by Robert F. Rogers, Francis E. A. Curley, James P. I. Morris and others of New York city.

Claysville—Foundry and Machine Works.—C. V. Harding of Washington, Pa., has organized South Pittsburgh Iron Co., with capital stock of \$100,000, to establish foundry and machine shops, general plate works, etc.; main offices in Frick Building, Pittsburgh, Pa.

Hannibal—Telephone System.—Hannibal & Round Bottom Telephone Co. has been incorporated to construct telephone system. J. A. Fraley is secretary, and Chas. Roth, general manager. Address secretary.

Huntington—Coal Mines.—Joseph Shelton is reported as having leased for development about 15,000 acres of coal land.

Kingwood—Coal Mines and Coke Ovens.—Chartered: Clifton Coal & Coke Co., to mine coal and manufacture coke; capital stock \$100,000; incorporators, J. S. Lakin, Perry Deberry, C. A. Miller, J. N. Flynn and P. J. Crogan.

Monroe—Coal Mines.—It is rumored that Junior Coal Co. has found a three-foot vein of marble while developing its coal mines, and will quarry the marble.

Moundsville—Glass Works.—Fostoria Glass Co. will increase capital from \$300,000 to \$400,000 and enlarge its plant.

Philippi—Mercantile.—Incorporated: Union Store Co., capital \$25,000, by L. D. Johnson, S. A. Moore, J. F. Manown, C. F. Teeter and W. H. Carter.

INDIAN TERRITORY.

Ardmore—Water-works.—American Light & Water Co., Indianapolis, Ind., has contract to construct water-works.

Duncan—Water-works.—City has let contract to L. E. Bumpass of Farmersville, Texas, for construction of water-works.

South McAlester—Water-works and Sewerage.—City has accepted plans and specifications by Chester B. Davis of San Antonio, Texas, for construction of water-works and sewerage system. Bids will be opened February 23. Pumping plant will have capacity of 3,000,000 gallons every twenty-four hours. Address the engineer.*

OKLAHOMA TERRITORY.

El Reno—Flour Mill, etc.—Choctaw Mill & Elevator Co. has been incorporated, with a capital stock of \$100,000, to construct and acquire flour mills and grain elevators. Incorporators are Stephen J. Spain, August R. Frank, Frederick Uhler and Henry Steiner, all of Chicago, and Oklahoma capitalists.

Oklahoma City—Publishing.—Incorporated: Oklahoma Publishing Co., with \$50,000 capital, by E. K. Gaylord of St. Joseph, Mo.; Roy E. Stafford, C. B. Ames, Roy McClintock and C. C. Hudson of Oklahoma City.

Taloga—Mining.—Chartered: Canadian Mining & Investment Co., with W. T. Rafington, president, and C. W. Sims, secretary.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Abbeville, S. C.—Courthouse.—Wilcox county has instructed Frank P. Milburn of Columbia, S. C., to prepare plans and specifications for \$50,000 courthouse. Contract will be awarded as soon as plans are ready. Address "County Commissioners."

Alexandria, La.—Theater.—Rapides Opera-House Co. has accepted plans by Favrot & Livaudais of New Orleans for construction of theater. Bids for erection will be opened March 3. About \$30,000 to be expended.

Arlington, Md.—Temple.—Sharon Temple Association has secured revised plans by Charles F. Gerwig for construction of its temple, to cost about \$18,000.

Atlanta, Ga.—Theater.—Geo. W. Parrott contemplates building \$300,000 theater.

Baltimore, Md.—School.—City has plans and specifications for erection of three-story school building 50x143 feet, with wings 33x65 feet each; estimated cost \$50,000. Bids will be invited. Address J. Edw. Preston, inspector of buildings.

Baltimore, Md.—Warehouse.—McIver & Piel have contract to rebuild warehouse for Lewis Haslup. Building will be 50x100 feet, five stories high, and cost \$15,000.

Baltimore, Md.—Theater.—James L. Kerban has purchased Front Street Theater, and will remodel the structure; office in Union Trust Building.

Baton Rouge, La.—Warehouse.—R. L. Gaylor & Co. will build sugar warehouse.

Beaumont, Texas—Association Building.—Y. M. C. A. has let contract to W. D. Appleton at \$41,400 for construction of building. J. E. Grubbs has plumbing contract at \$3850.

Brookhaven, Miss.—Jail.—Pauly Jail Building Co. of St. Louis, Mo., has contract at \$17,865 to furnish plans and specifications and build jail.

Cerulean, Ky.—Hotel.—Incorporated: Cerulean Springs Hotel Co., capital stock \$25,000; R. S. Pool, president, and W. H. Sims, secretary.

Charleston, S. C.—Court Building.—Henry T. Zacharias and Louis F. Sloan recently secured contract at \$25,800 for construction of building for Commercial Club. The work is now in progress. Owners reserve privilege of instructing contractors to continue as per original plans, calling for expenditure of \$32,000.

Columbus, Ga.—Office Building.—Board of Trade contemplates erecting \$20,000 office building.

Dallas, Texas—Hotel.—Thomas Naracrosse, Lewis M. Dabney and others have incorporated Majestic Apartment Building Co. to erect hotel five stories high, 160-foot front, with laundry equipment and other modern improvements. From \$200,000 to \$250,000 will be expended.

Darlington, S. C.—Hotel.—Darlington Hotel Co. has been incorporated, with H. E. Coleman, secretary. Capital stock is \$25,000.

Elba, Ala.—Courthouse.—Coffee county will build courthouse to cost \$20,000. Address "County Commissioners."

Fayetteville, W. Va.—Hotel.—T. B. Blake of Red Star, W. Va., and associates will build \$10,000 hotel.

Franklin, La.—Courthouse.—St. Mary parish will open bids February 16 for plans, specification and construction of courthouse, for which \$110,000 was recently appropriated. Address R. E. Milling, chairman of committee.

Gulfport, Miss.—Courthouse.—Harris county supervisors will open bids March 2 for construction of courthouse in accordance with plans and specifications by Andrew J. Bryan & Co., Hennen Building, New Orleans, La. Plans, etc., on file at county clerk's office

in Mississippi City, and office of architects in New Orleans. Certified check for \$10,000 must accompany bids.

Harrisonburg, Va.—Bank Building.—First National Bank let contract to W. M. Bucher for construction of its bank building mentioned last week; structure to be 73x100 feet, five stories high; most of work to be sublet by contractor.

Houston, Texas—Theater.—Charles J. Wolf and I. L. Wolf contemplate remodeling Masonic Temple into theater.

Howards Park, Md.—College Building.—Maryland Agricultural College has awarded contract to Werner Bros. of Ellicott City, Md., for construction of administration building. Cost will be about \$40,000. Owens & Sisto of Baltimore prepared plans.

Hyattsville, Md.—Power-house.—Washington & Annapolis Railway is now inviting bids on erection of power-house 120x200 feet, one story, to cost about \$40,000. Address care James Christy, Washington, D. C.

Hyattsville, Md.—Power-house.—Cleveland Construction Co. of Akron, Ohio, has charge of constructing power-house, mentioned last week, for Washington & Annapolis Railway Co. Structure will cost about \$30,000. Henry S. Rippel of Baltimore is preparing an estimate.

Lenoir, N. C.—Warehouse.—Bernhardt Hardware & Furniture Co. will build warehouse three stories, 54x130 feet, with freight elevator, etc.; Hook & Sawyer, Charlotte, N. C., architects.*

Louisville, Ky.—Library.—City has purchased site for library to be erected at a cost of \$250,000. Architects have been asked to submit plans. Address "The Mayor."

Macon, Ga.—Office Building.—Henry Horne will erect office building, ten stories, steel frames, 40x100 feet, with two electric elevators, steam heat, cooling equipment, electric lights, modern sanitary equipment, fireproof vault on each floor, etc., to cost \$125,000.

Meridian, Miss.—Freight Depot.—C. M. Rubush has contract at \$50,000 for erection of freight depot.

Monterey, Tenn.—Hotel.—Monterey Hotel Co. will build an additional hotel.

Petersburg, Va.—Warehouse.—Stratton & Bragg Company, 20 North Sycamore street, proposes building a large machinery warehouse.

Raleigh, N. C.—Hotel.—Yarborough Hotel will be remodeled and refurnished; Howell Cobb, proprietor.

Roanoke, Va.—Hospital.—Frye & Chesterman of Lynchburg, Va., will furnish plans and specifications for hospital to cost \$20,000.

Salisbury, Md.—Apartment Store.—R. E. Powell & Co. will erect apartment store 83x200 feet, to cost \$50,000. Jackson C. Gott of Baltimore is preparing plans and specifications.

Statesville, N. C.—Hotel.—Incorporated: Statesville Hotel Co., with \$25,000 capital authorized, by J. W. Gray, Sig. Wallace, H. P. Holland and others.

St. Louis, Mo.—Hotel.—George M. Phillips will build hotel to cost \$200,000.

St. Louis, Mo.—Warehouse.—Hadley-Dean Glass Co. has let contract to Nicholas Pettigreen at about \$94,000 for erection of glass warehouse 60x100 feet, seven stories high, steel-frame construction, slow-burning mill construction, etc.

Toccoa, Ga.—Bank Building.—First National Bank will erect office building; T. W. Scott, vice-president.

Union, S. C.—Church.—Wheeler & Runge of Charlotte, N. C., will prepare plans and specifications for edifice for Presbyterian church.

Vicksburg, Miss.—Bank Building.—First National Bank has purchased for \$40,000 site for its proposed five-story combination bank and bachelors' hotel. Plans are being drawn.

Wadesboro, N. C.—Office Building.—Leake Marshall will erect three-story office and storeroom. Hook & Sawyer of Charlotte, N. C., are preparing the plans.

Washington, D. C.—School.—J. S. Larcombe has contract at about \$100,000 to erect school and hall building.

Washington, D. C.—School.—James Dunn has contract at \$38,400 for erection of school.

Washington, D. C.—Hotel.—Ralph S. Townsend is preparing plans and specifications for hotel.

Washington, D. C.—Dwellings.—N. T. Haller & Co. are preparing plans for twenty costly dwellings for Charles W. King.

Washington, D. C.—Apartment-house.—National Realty & Construction Co. will build apartment-house 40x100 feet, to cost \$500,000. P. Thornton Marye of Newport News, Va., will prepare plans and specifications.

RAILROAD CONSTRUCTION.

Railways.

Afton, Va.—Engineers are reported surveying three miles from Afton for a railroad to tap the Chesapeake & Ohio at or near Afton, and going through the Rockfish valley to connect with the Richmond & Alleghany line of the C. & O.

Apalachia, N. C.—W. H. Petty, foreman of the Cherokee Land Co., is reported to have the contract for building the Apalachia & Cleveland Railroad from Apalachia to Cleveland, Tenn., thirty-five miles. Three miles of grading are reported done, and an extension may be built northward to Tellico Plains, ten miles.

Ardmore, I. T.—The Paul's Valley extension of the Atchison, Topeka & Santa Fe is now having track laid on it between Chickasha and Lindsay.

Baltimore, Md.—Surveys will, it is reported, be made in the spring on the proposed extension of the Queen Anne's Railroad from Hobbs, Md., to a point opposite Chincoteague Island, Virginia, via Sharpsburg, Salisbury and Snow Hill, Md. W. H. Bosley is president at Baltimore.

Baltimore, Md.—It is reported that the Baltimore & Ohio Railroad will build a branch from Wheeling into Greene and Fayette counties, Pennsylvania. J. M. Graham is chief engineer at Baltimore.

Baltimore, Md.—A permanent survey is being made for the Baltimore & Frederick Electric Railroad Co. James E. Ingram, Jr., is president.

Baltimore, Md.—It is reported from Morgantown, W. Va., that engineers for the Baltimore & Ohio Railroad are running a line to connect Morgantown via Easton and Brunswick with the Confluence & Oakland Railroad east of Morgantown. J. M. Graham is chief engineer at Baltimore.

Bennettsville, S. C.—Grading is reported begun on the proposed Cheraw & Bennettsville Railroad, fourteen miles long. James A. Drake is president at Bennettsville.

Bel Air, Md.—B. E. Cutler has, it is reported, made a survey for the proposed Baltimore & Bel Air Electric Railway, in which S. A. Williams and others of Bel Air are interested.

Chase City, Va.—T. M. T. McKennon has, it is reported, completed a survey for the proposed Blackstone & Chase City Railroad, about forty miles long, work to begin in the spring.

Chattanooga, Tenn.—The Cleveland & Ducktown Electric Railway, represented by S. W. Divine, has applied to the city council for a franchise on Eleventh street.

Chicago, Ill.—A letter from an official of the company to the Manufacturers' Record denies that the Atchison, Topeka & Santa Fe Railway will build an extension from Owasso, I. T., to Tulsa, I. T., and thence southeast.

Chicago, Ill.—Mr. H. A. Parker, first vice-president of the Chicago, Rock Island & Pacific Railway Co., writes the Manufacturers' Record: "The Choctaw, Oklahoma & Texas Company has completed a location from Amarillo, Texas, west to the State line, a distance of seventy-two miles, and the Chicago, Rock Island & Choctaw Railway Co. has completed a location from the last-named point westward to Tucuman, N. M., a distance of forty miles. None of this line has yet been placed under contract."

Chicago, Ill.—It is reported that the Illinois Central Railroad is surveying for a line from Mayfield, Ky., to Gilbertsville, Ky., twenty-eight miles. H. U. Wallace is chief engineer at Chicago.

Chipley, Fla.—Mr. W. O. Butler, Sr., writes to the Manufacturers' Record concerning the Birmingham, Columbus & St. Andrews Railroad, saying that it will be built from St. Andrews north via Chipley, Fla., Dothan and Eufaula, Ala., and thence either direct to Birmingham with a branch to Columbus, Ga., or via Columbus to Birmingham. The road will be over 200 miles long.

Cincinnati, Ohio.—It is reported that the Queen & Crescent will build a branch from Hixson Station to Walden's Ridge, in Tennessee, five miles. G. B. Nicholson is chief engineer at Cincinnati.

Cockeysville, Md.—The incorporation of the Towson & Cockeysville Electric Railway Co., capital \$100,000, is proposed by William H. Wight and Joshua F. Cockey of Cockeysville, Capt. Emanuel Herman of Lutherville and James S. Nusser and M. W. Offutt of Towson to build a line southward from Ashland via Cockeysville, Texas, Timonium and Lutherville to Towson to connect with the lines of the United Railways & Electric Co. of Baltimore. The road will be about six and one-half miles long.

Cordele, Ga.—It is reported that the Seymour Lumber Co. has awarded the contract for a tramway from Tity to a point six miles south.

Corpus Christi, Texas.—Engineers are reported at work at Rogers, fourteen miles from Corpus Christi, for the proposed St. Louis, Brownsville & Mexican Railroad. Col. Uriah Lott of Corpus Christi is the promoter of the line.

Crowley, La.—The Louisiana Railroad Co., which proposes to build a line from Crowley to Natchitoches, about 130 miles, has been granted the right to lay its tracks on Mill street. The officers of the company are: Hampden Story, president; G. H. Brooks, secretary; E. N. Pugh, Jr., assistant secretary; T. J. Toler, treasurer; J. D. Beardsley of Gibsland, La., is the promoter and contractor, and his attorney, John A. Richardson, of Homer, La., is reported as saying that work will probably begin in two weeks.

Dallas, Texas.—The Northern Texas Traction Co. has filed a mortgage for \$2,500,000 with the purpose, it is stated, of improving its line and building extensions. George T. Bishop is president.

Dallas, Texas.—It is reported that the Texas & Pacific Railway has awarded to J. W. Thompson of St. Louis a contract for ballasting the line with gravel from New Orleans to Shreveport, 360 miles.

De Land, Fla.—F. E. Bond and others are pushing the plan for an electric line from De Land to Daytona and other coast points.

Dyersburg, Tenn.—J. F. Halliton, W. H. Fowler and R. M. Hall have been appointed a committee by a citizens' meeting to confer with officers of the Illinois Central Railroad to secure an extension of its branch from Dyersburg via Ridgeley to Tiptonville, Tenn., about thirty miles.

Elkton, Md.—The city council has decided to grant the franchise asked by the Kent & Cecil Light, Power & Railway Co. for its line from Newark, Del., through Elkton and South. Edwin R. Cochran of Wilmington is president.

Ellisville, Miss.—It is reported that the line of the proposed Ellisville & Laurel Railroad, about eight and one-half miles long, is more than half graded. T. S. Howell of Ellisville and others are interested.

Esau, Ark.—The Fourche Lumber Co. is reported to have awarded a contract to build a mile of railroad from Esau to Red Ferry.

Fairmont, W. Va.—Engineers who are supposed to represent the Wabash Railroad have completed a survey for a line into Fairmont.

Fairmont, W. Va.—The Fairmont & Colfax Short Line Railroad has made application for a charter from Hoult to Colfax. The incorporators are W. H. Spragg, M. L. Hutchinson, R. G. Williams, C. W. Swisher and Harry Shaw.

Fort Myers, Fla.—The Atlantic Coast Line Railroad has been granted right of way through Fort Myers.

Fort Worth, Texas.—Tracklaying has begun on the Rock Island's line between Fort Worth and Dallas.

Galveston, Texas.—The Gulf, Colorado & Santa Fe Railway will, it is reported, lay 65-pound rails from McGregor to Cameron and from Fort Worth to Bumar.

Harrisonburg, Va.—Surveys are reported made on the proposed extension of the Chesapeake Western Railway, and revisions are in progress. E. W. Jackson is chief engineer and James A. Paterson, assistant engineer, at Harrisonburg.

Henrietta, Texas.—W. A. Squires of the Oklahoma & Southern Railroad is reported to have applied to the city council of Mineral Wells for rights of way for the line.

Houston, Texas.—It is reported from Haskell that Contractor Wright has resumed grading for the Omaha, Kansas & Texas Railway south towards Brady. C. C. Waller, president of the Velasco, Brazos & Northern, is interested, and also William Whittemore of Chicago, who will supervise the construction.

Jackson, Tenn.—Secretary T. H. Arnold of the Jackson Commercial Club writes the Manufacturers' Record saying that the electric line in which he is interested is planned from Jackson to the Mississippi river opposite either Caruthersville, Mo., or Osceola, Ark., sixty-five miles. Surveys have been made, one via Belts, Alamo, Crockett Mills, Friendship and Dyersburg, and another via Brownsville and Ripley.

Kansas City, Mo.—William Kenefick and F. S. Hammond are reported to have the contract for building part of the White River extension of the Missouri Pacific from Aurora, Mo., to the second crossing of the White river, seventy-six miles.

Knoxville, Tenn.—Between 2500 and 3000 men are now reported to be employed on the

construction of the Knoxville, La Follette & Jellico Railroad. On the branch from Dossett to Oliver Springs and Cow Creek nearly all the line is also under construction.

Lexington, Ky.—W. P. Dickerson proposes to build a railroad from Glasgow to Burkesville, twenty-one miles.

Liberty, Miss.—The Liberty-White Railroad Co. has been organized, with \$500,000 capital, and J. J. White, president; W. M. White, vice-president; J. J. White, Jr., secretary; Hugh L. White, treasurer. The road is to be a broad-gauge line from McComb City to Liberty.

Lockhart, Texas.—Plans are reported under consideration for building an electric railway from Lockhart to San Antonio via Maxwell, Reedville, Martindale and Staples, and thence back to Lockhart via Seguin, Fentress and Prairie Lea.

Louisville, Ky.—The ordinance granting a franchise for the Falls City Belt Line Railroad Co. to build a connecting line has been approved by the mayor.

Monte Ne, Ark.—An officer of the Monte Ne Railway informs the Manufacturers' Record that nothing is yet determined about the proposed extension.

Montgomery, Ala.—Mr. M. Mason, chief engineer of the Western Railway of Alabama and the Atlanta & West Point Railroad Co., writes the Manufacturers' Record, saying: "We are changing our main line from Soapstone Creek to Selma, seven miles. At present we cross the Alabama river near Soapstone Creek, but by the change we run down the Montgomery side of the river and cross at Selma on a bridge being constructed by the Louisville & Nashville Railroad."

Muskogee, I. T.—The Chamber of Commerce has appointed a committee to communicate with the Missouri Pacific Railway Co. regarding a plan to build an extension to Muskogee from Wagoner or Fort Gibson.

New Orleans, La.—L. S. Berg, representing the St. Louis & San Francisco Railroad, is reported as saying that as soon as the terminal ordinance passed by the city council becomes effective, the company will begin building its line into New Orleans.

Palestine, Texas.—It is reported that the International & Great Northern Railroad is planning to build a line from Dallas via Palestine to New Orleans. J. D. Trammel is chief engineer at Palestine.

Parkersburg, W. Va.—The Ohio Valley Electric Railway Co., through V. B. Archer, its attorney, has applied for a charter to build an electric railway from Williamstown via St. Mary's and Friendly to Sistersville.

Parkersburg, W. Va.—It is reported that J. T. Blair, president, and others interested in the Little Kanawha Railroad will build a line from Buckhannon via Fairmont to Cumberland, Md., crossing the Fairmont and Cumberland coal fields.

Parkersburg, W. Va.—Plans are made to build the proposed Lorama Railway from Middlebourne to Troy in the spring. R. C. Venable is chief engineer at Parkersburg.

Philadelphia, Pa.—Engineers for the Pennsylvania Railroad under the charge of I. W. Troxel are reported to be making a survey for improving the Northern Central Railway in Maryland. W. H. Brown is chief engineer at Philadelphia.

Pittsburg, Pa.—F. K. Smith, the Pittsburg manager of the Republic Iron & Steel Co., is reported to be pushing the plan to build the proposed Wheeling, Waynesburg & Eastern Railroad from Wheeling, W. Va., to Waynesburg, Pa., and thence to Millsboro. Others reported interested are J. F. Smith, J. H. Hurlbutt of New York and Mark W. Potter, also of that city.

Raleigh, N. C.—The North Carolina & Tennessee Southern Railroad has asked for a charter to build from Franklin to the Tennessee line.

Raleigh, N. C.—It is reported that application will be made for a charter for the North Carolina & Ohio Railroad, to start from Norfolk, Va., and run through North Carolina for some distance.

Raleigh, N. C.—A bill has been introduced in the House to charter the Raleigh & Eastern Railroad Co. to build the proposed line from Raleigh to Washington, eighty-eight miles, in which James H. Pou and others are interested; capital stock \$2,000,000.

Senath, Mo.—A. A. Caner, secretary of the Senath, Rector & Western Railroad Co., writes the Manufacturers' Record: "We expect to construct a first-class standard-gauge road about fifteen miles long, connecting Senath, Mo., and Rector, Ark., crossing the St. Francis river about the mouth of Varner."

Shreveport, La.—President William Edenborn of the Shreveport & Red River Valley Railway is reported as making the state-

ment before the New Orleans city council that 170 miles of his line have been built, with sixty more miles under construction, and 160 miles additional are required to reach New Orleans. He is also quoted as saying that the company has bought half a mile of river-front property for terminals.

Sistersville, W. Va.—It is reported that the New Martinsville, Sistersville & Middlebourne Electric Railway Co. is considering a plan to extend its proposed line as far as Pennsboro.

St. Augustine, Fla.—The St. Augustine & South Beach Railway has been purchased by J. W. Henderson and Horace Lindsley, who will, it is reported, convert it into an electric railway and build an extension. The line is five miles long.

St. Augustine, Fla.—Concerning the proposed extension south of Miami, Mr. J. R. Parrott, vice-president of the Florida East Coast Railway, writes the Manufacturers' Record that the line, if constructed, will be only about twenty miles long, and almost due south from Miami. Construction will be under the charge of the company's engineering force.

St. Louis, Mo.—The Mobile & Ohio Railroad has, it is reported, purchased thirty acres of land from John P. Key at Jackson, Tenn., for new yards. C. S. Clark is general manager at St. Louis.

St. Louis, Mo.—It is reported that the Missouri Pacific will build a cut-off from Diaz to Wynne, Ark., about fifty miles, to be used in connection with White River Line for a short route to Memphis from the West. H. Rohrer is chief engineer at St. Louis.

St. Louis, Mo.—The St. Louis & San Francisco Railroad's ordinance has passed the city council at New Orleans, La., giving it the right to enter that city. J. F. Hineckley is chief engineer of construction, 800 Fullerton Building, St. Louis.

St. Louis, Mo.—The St. Louis, Hillsboro & Southwestern Railroad Co., which is to build a line from St. Louis to Hillsboro, has filed a mortgage for \$1,250,000. Thomas F. Sneed is president.

St. Louis, Mo.—Talley & Sims of St. Louis are reported to have the contract for the Missouri Pacific's Memphis, Helena & Louisiana Railroad, three miles south of Edmondson, Ark.

St. Louis, Mo.—On the White River line of the Missouri Pacific Railway contracts have been let from the White river crossing to Oregon Flats to J. H. Reynolds of St. Louis, and from Carthage, Mo., to the crossing of the James Fork to the Dalhoff-Bethune-McNerney Construction Co. of Carthage, Mo. The line between Oregon Flats and the crossing of the James Fork is not yet under contract.

Talladega, Ala.—Grading is reported nearly completed on the Louisville & Nashville branch from Talladega to Pyliton, twenty-three miles.

Washington, D. C.—Lane Brothers are reported to have been awarded the contract to double-track the Southern Railway from Manassas to Orange, including reduction of grades and curves. The company will, it is also reported, soon begin building double track between Asheville, N. C., and Biltmore. W. H. Wells is chief engineer of construction at Washington.

Wheeling, W. Va.—The Wheeling, West Liberty & Belt Railway Co. has been incorporated by C. L. Hill of Wheeling, William Chambers of Elm Grove, Will Gutman, Jas. W. Ewing, W. V. Hoge and E. Ball, to build a trolley line from Wheeling along the National pike to Fulton, Greggsville and West Liberty, thirteen miles, with a loop from Greggsville to Woodsdale and back to the main line at Altenheim; also a belt from a point between Edgington lane and Fulton to Mount De Chantal and back to Thompsons, on the main line.

Wheeling, W. Va.—President J. J. Holloway of the Tennessee & North Carolina Railroad Co., referring to a recent report, writes the Manufacturers' Record, saying: "We have no present intention of extending our line from Waterville, N. C., to Waynesville, N. C."

Wichita Falls, Texas.—Mr. Robert E. Huff, one of the incorporators of the Lawton, Wichita & Gulf Railway Co., writes to the Manufacturers' Record: "We have not as yet fully determined on route. We hope to build from Lawton, O. T., to Wichita Falls, Texas, within the next year, but have not as yet placed engineers in the field."

Street Railways.

Algiers, La.—It is reported that a street railroad will be built in Algiers. Engineers are making a preliminary survey.

Beaumont, Texas.—Ralls have been received for the proposed street-railway exten-

sions, and it is reported that the extension to the oil fields will be built immediately.

Columbus, Ga.—A bill has been introduced in the legislature to permit the Columbus Railroad Co. to extend its lines into Phoenix City.

Sheffield, Ala.—Col. R. H. Wilboye, representing the Sheffield Company, recently incorporated in New Jersey, has applied to the city council of Tusculumbia for an electric street railway franchise. The line is to connect Tusculumbia, Sheffield and Florence.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Aluminum Manufacturers.—C. J. M. Shine, Jacksonville, Fla., wants addresses of aluminum manufacturers.

Arithmetical Machines.—See "Hides and Leathers."

Bank-note Paper.—See "Hides and Leathers."

Barrels.—Merchants and Manufacturers' Association, W. B. Burdette, secretary, Rockville, Md., wants addresses of manufacturers of barrels suitable for shipping water.

Bobbin and Spool Machinery.—See "Wood-working Machinery."

Boiler and Engine.—See "Electric-light Plant."

Boiler and Engines.—See "Ironworking Machinery."

Boilers.—See "Water-works."

Boilers and Engine.—Marcellus E. Thornton, Hickory, N. C., wants 125-horse-power engine (Hamilton, Corliss or Westinghouse), with boilers to suit; second-hand.

Bolling Plant.—See "Water-works."

Broom Machinery.—J. L. Devin, Chase City, Va., wants prices on broom machinery.

Building Materials.—Bernhardt Hardware & Furniture Co., Lenoir, N. C., wants samples of gray pressed bricks.

Cann Machinery.—See "Canning Machinery."

Candy Machinery.—Hoggins-Murkin Manufacturing Co., Nashville, Tenn., wants prices on machinery for making hard-bottled candies.

Canning Machinery.—Alfred Craus, Maison Rouge, Metz, Germany, wants catalogues, prices and general information as to American machinery for canning vegetables. He asks especial information on equipment for canning green peas cooked in the cans, this including machine which cuts plants of green peas, which will later be crushed to be put in cans; machine to crush peas which stick to plants after harvester has finished with them, machine to separate good peas from bad peas, machine for cleaning peas, machine for separating peas that are too small and those that are broken, and a machine for placing crushed peas in cans.

Canning Machinery.—Appomattox Cannery Co., N. T. Patterson, secretary, Petersburg, Va., solicits price-lists of latest improved machinery for canning; also for manufacturing cans of various sizes.

Cement Machinery.—Charles H. Wing, 1210 Florida avenue, Tampa, Fla., wants rotary sand dryer, capacity about five yards per day; also power-mixing machine for mixing cements. Second-hand machines will do.

Cheewing-gum Machinery.—Valentine Manufacturing Co., 958 Cheautau street, St. Louis, Mo., wants second-hand cheewing-gum cutting and rolling machines.

Clothing Machinery.—See "Sewing Machines."

Cotton Ginnery.—See "Oil Mill."

Cotton Machinery.—A. W. Brooks, Mobile, Ala., wants to correspond with manufacturers of machinery for making cotton bolls, comforts and other mattress material.

Cotton Oil.—See "Greases and Oils."

Crusher.—See "Lime Works."

Cut-glass Machines.—See "Glass-works Machinery."

Dairy Plant.—Hillside Dairy Farm, W. M.

Glass, Box 443, Birmingham, Ala., will need equipment for dairy handling 1000 gallons of milk daily. Milk will be sterilized and delivered in sterilized bottles. Butter and ice-cream machinery will be wanted.

Drying Apparatus.—See "Cement Machinery."

Electrical Machinery.—Empire Plow Co., Cleveland, Ohio, will want electric generator and motors, pumps for bored wells 100 feet deep, and 15,000-gallon steel tank set up on steel frame seventy feet high; all to be used at Ensley, Ala.

Electric Call Bells.—W. J. Horsley, Arlington, Ga., will need electric call bells.

Electric-light Plant.—Stevens Bros. & Co., Stevens Pottery, Ga., will possibly buy electric-light plant.

Electric-light Plant.—See "Water-works."

Electric-light Plant.—S. B. Thompson, Lake City, Fla., wants prices on 200-light dynamo, engine and boiler, new or second-hand.

Electric-light Plant.—Harold L. Davidson, Sebree, Ky., wants to correspond with contractors furnishing complete plant for lighting town of 2000 population.

Elevators.—Moore-Handley Hardware Co., Birmingham, Ala., wants electric elevators, also hydraulic elevators and sprinkler system.

Engine.—W. H. Britton & Co., Timberland, N. C., want 50 or 60-horse-power engine. Second hand will do.

Engine Patterns.—Union Iron Works Co., Selma, Ala., wants patterns for side-crank engines up to 100 horse-power.

Engines.—See "Engine Patterns."

Excelsior Machinery.—Andrew Mitchell, Jr., 63 Canaan street, Carbondale, Pa., wants addresses of manufacturers of excelsior machinery and cut-glass machinery.

Excelsior Machinery.—Boaz Saw & Lumber Co., Boaz, Ala., wants prices on excelsior machinery.

Extract Machinery.—See "Pitch-pine Products Machinery."

Fencing.—Poole & Co., Roxobel, N. C., want prices on iron or steel lawn fences.

Fire-protection Equipment.—See "Elevators."

Glass-works Machinery.—See "Excelsior Machinery."

Greases and Oils.—G. Van Leiberghen, 26 Rue d'Irlande, Brussels, Belgium, wants general agency for American cotton oils and greases suitable for candle, soap and oleomargarine manufacturing.

Handles.—Canadian Typograph Co., Windsor, Ontario, Canada, wants wooden handles and knobs such as are used on iron planes.

Hanger Manufacturers.—Columbia Supply Co., 304 West Gervais street, Columbia, S. C., wants information from manufacturers as to an adjustable drop hanger, the drop of which can be made any length by using extra heavy, short or long pipe nipples.

Heating Apparatus.—D. W. Jacobs, Clarksburg, W. Va., wants addresses of manufacturers of small radiators, about 10, 20 and 30 foot surface.

Hides and Leathers.—P. N. Constantopoulos, Athens, Greece, wants addresses of American manufacturers of hides and leathers; also of machines for writing and calculating; also manufacturers of paper suitable for bank notes.

Hoisting Engine.—S. W. Shoop, Gaffney, S. C., wants double cylinder single-drum hoisting engine, either 7x10 or 8x10.

Ironworking Machinery.—See "Machine Tools."

Ironworking Tools.—Casey & Michael, Harrisonville, Ohio, want descriptive price-lists of engine lathes, ironworking tools, etc., second-hand, and of engines and boilers.

Insulator Pins, etc.—W. P. Carson, Taylorsville, N. C., wants addresses of dealers in insulator pins and brackets.

Light-wood Products Machinery.—See "Pitch-pine Products Machinery."

Lime Works.—F. C. Cheney, Anniston, Ala., wants prices on lime-works equipment and on crusher for reducing fluxing stone.

Machine Tools.—See "Ironworking Machinery."

Machine Tools.—O. K. Harry Steel Works, 233 Papin street, St. Louis, Mo., wants 10-foot cornice break and 10-foot square shears, second-hand.

Machine Tools.—L. W. Gunby Co., Salisbury, Md., will be in the market for lathes, planers and other ironworking machines, and a travelling crane with hoist for handling heavy machinery.

Machinery.—Gaskill Hardware & Machine Supply Co., New Berne, N. C., wants catalogues of machinery and mill supplies.

Marine Machinery.—See "Steamboat Machinery."

Mattress Machinery.—See "Cotton Machinery."

Mill Supplies.—See "Machinery."

Mill Supplies.—See "Woodworking Machinery."

Mill Supplies.—Crescent Bed Co., Orange, South Peters and Tchoupitoulas streets, New Orleans, La., wants six or eight trucks for factory use.

Mining Equipment.—G. S. McElroy, Box 658, San Antonio, Texas, wants information as to the manufacture of appliances adapted to handling cinnabar and quicksilver.

Oil Mill.—W. S. Mize, Harmony Grove, Ga., will need cotton-oil-mill equipment; also cotton ginners.

Paper Cutter.—See "Printing Machinery."

Pitch-pine Products Machinery.—W. F. Penniman, 19 East Bay street, Savannah, Ga., wants information concerning extracting resinous properties of pitch pine (light wood), meaning such products as tar, turpentine, creosote, charcoal, pyroligneous acid, etc.; also wants estimates on cost of plant.

Pottery Machinery.—Harley Pottery Co., 317 Brook street, Nashville, Tenn., wants mill for grinding clay, washer, strainer, jolies, patterns for jugs, jars, etc.

Printing Machinery.—Olmstead Bros., 1518 Main street, Wheeling, W. Va., will want printing machinery for roll and sheet paper; also stereotype outfit (cold process); also a paper cutter.

Pump.—See "Electrical Machinery."

Railway Company.—Union Iron Works Co., Selma, Ala., wants standard-gauge Shay locomotive, about thirty tons, and one eight-wheel standard-gauge locomotive, about thirty tons.

Railway Equipment.—Homer Bowes, 611 Penn Avenue, Pittsburg, Pa., wants 60 to 80-ton standard-gauge locomotive for freight traffic.

Railway Equipment.—"Traction," care Manufacturers' Record, wants six 10-bench (reversible backs) electric street railway cars, second-hand. Name price with and without electrical equipment. Must be subject to inspection.

Safe.—Continental Chair Co., Mebane, N. C., wants second-hand safe, forty-two inches or more. Give size and best cash price.

Saws.—See "Woodworking Machinery."

Sewerage System.—See "Water-works."

Sewing Machines.—Chas. D. Parsley, Wilmington, N. C., wants full information as to manufacture of pajamas, shirts, drawers, overalls, etc., prices on equipment necessary, probable profits, etc.

Sewing Machines.—T. L. Riddle, High Falls, N. C., wants machinery for manufacturing shirts and trousers.

Shingle Mill.—W. C. Leland, 214 Prince street, Knoxville, Tenn., wants shingle machine.

Skewer Machinery.—H. D. Williams, Huntsville, Ala., wants machine for manufacturing meat skewers.

Spring-bed Machinery.—See "Wireworking Machinery."

Steamboat Machinery.—Pensacola, St. Andrews & Gulf Steamship Co., Pensacola, Fla., wants small steamboat machinery.

Steam Shovel.—Southern Paving Gravel Co., Savannah, Ga., may possibly need steam shovel for gravel mining in the future.

Steam Shovel.—Box 145, Roanoke, Va., wants second-hand steam shovel.

Steam Shovels.—James & Co., Chattanooga, Tenn., want four steam shovels, new or second-hand; immediate shipment.

Steel Workers.—O. K. Harry Steel Works, 233 Papin street, St. Louis, Mo., wants first-class men for steel railing, fencing and tank work.

Stencilling Machines.—Wallach Bros., 57 Gracechurch street, London, E. C., England, wants addresses of makers of machines for stencilling wicker work.

Tank.—See "Electrical Machinery."

Telephone Equipment.—Gainesville Telephone Co., Gainesville, Texas, and Cleburne Telephone Co., Cleburne, Texas, will need equipment and material for systems. F. B. McElroy, 112 West Ninth street, Fort Worth, Texas, is the organizer; Jones & Winter, 1259 Monadnock Building, Chicago, engineers in charge.

Tin-can Machinery.—See "Canning Machinery."

Tobacco Machinery.—Boulard Freres, Alexandria, Egypt, wants to correspond with American manufacturers of cutlery, especially knives for cutting the threads of tobacco.

Traveling Crane.—See "Machine Tools."

Trucks.—See "Mill Supplies."

Typewriters.—See "Hides and Leathers."

Underwear Machinery.—See "Sewing Machines."

Water-wheels.—W. J. Lunsford, Bruno, Va., wants prices on water-wheels, second-hand.

Water-works.—F. H. Beeman & Co., New Albany, Ind., want full equipment for water-works and electric-light plant.

Water-works.—John H. Norville, Intendant, Livingston, Ala., wants to correspond relative to installation of boiling plant for artesian well supply.

Water-works.—City of South McAlester, I. T., will open bids February 28 for furnishing material and building water-works and sewerage. Plans and specifications are on file in offices of engineer, Chester B. Davis, in South McAlester and in San Antonio, Texas, after February 15. Pumping plant will have capacity of 3,000,000 gallons in twenty-four hours. Address the engineer at San Antonio.

Wireworking Machinery.—Anderson Mattress & Spring Bed Co., Anderson, S. C., wants spring collars, knotters, wire weaving and strand machinery.

Woodworking Machinery.—D. M. Reaves, Toccoa, Ga., wants spool and bobbin machinery, saws, belting, etc.

Woodworking Machinery.—W. H. Nickerson, Denbigh, Va., wants pony planer, circular resaw and gang edger.

Woodworking Machinery.—W. B. Woodward, New Smyrna, Fla., wants prices on shingle and gang edgers for edging boards from big saw.

Woodworking Machinery.—See "Skewer Machinery."

Woodworking Machinery.—Seymour Lumber Co., Cordele, Ga., wants 12x16 or larger planer.

Woodworking Machinery.—See "Shingle Mill."

TRADE NOTES.

Hardie-Tynes Orders.—One of the progressive Southern industrial plants is the Hardie-Tynes Foundry & Machine Co. of Birmingham, Ala. This company is constantly securing important contracts throughout its section. Its most recent orders comprised a 600-horse-power heavy-duty Corliss engine, to be installed at High Point, N. C.; this is the second engine of this make the High Point plant obtained from the Birmingham concern. Another order is from Kansas City. It calls for a 500-horse-power Corliss engine.

American Iron & Steel Manufacturing Co. The suit in equity brought by C. W. Wilhelm, administrator, and the Wilhelm family, Reading, Pa., against American Iron & Steel Manufacturing Co. of Lebanon, Pa., has been withdrawn by plaintiffs, who pay the costs. It was claimed that American Iron & Steel Manufacturing Co. had impaired its capital by payment of dividends on common stock. The Wilhelms, who had sold their common and held only preferred stock, prayed an injunction prohibiting the future payment of common-stock dividends. The management of the company employed the services of one of the leading expert accountants of the country to go over every item of its accounts from date of incorporation. The result was most gratifying, if not unexpected. The conservative analysis of the expert proved the company to be in even better condition than announced in its published annual reports, excellently well managed, and on a most sound basis. It is presumed that the plaintiffs became aware of this fact. The American plant produces merchant bar iron, bolts, nuts, rivets, etc.

Columbus Iron Works Co. Ice Machinery.—Reference was made January 29 to the completion of the ice machinery manufacturing department of the Columbus (Ga.) Iron Works Co. Those interested are invited to notice that the manufacture of ice machines is not a new departure with the Columbus company, but the new plant takes the place of one that was destroyed by fire last year. As a matter of fact, the Columbus Iron Works Co. has been manufacturing ice machines for about thirty-five years, having installed more than 500 different plants in the United States, Mexico, Cuba and South America. The machines range in size from five tons to 200 tons daily capacity. They are not experiments, having thoroughly stood the test of time and proved themselves entirely satisfactory, even to the most exacting users. The company's new plant, for general iron-working, etc., in its entirety is one of the most modern character both as to buildings and equipment, and has double the capacity of the former plant.

Factory Sites, etc.—Factory sites, waterfront and suburban properties, farms, timber and mineral lands are included in the properties offered for sale by Messrs. Jos. R. Ives & Co., 275 Main street, Norfolk, Va. This firm offers to purchasers a varied assortment of lands adapted for various developments. Write for information.

Fort Worth, Texas.—One of the most progressive cities of the Southwest is Fort Worth, Texas. Its facilities for manufacturing and other businesses are rapidly advancing it to the front rank, and the local business men are using every endeavor to locate more industries. Fort Worth is the packing-house, railway and cattle center of the Southwest. It has eleven trunk lines of railway radiating in sixteen different directions. It also has an abundance of raw materials and reaches easily convenient markets for the finished product. A cotton factory, tannery, shoe factory, cannery, wholesale dry goods establishment and a modern hotel are especially wanted. The Fort Worth Board of Trade will give further particulars to inquirers and explain what advantages can be obtained by selecting Fort Worth as a location.

Merit Receiving Recognition.—It is being noted that the largest cement works of the country, appreciating that the Griffin mill always gives great satisfaction as a cement grinder, are buying large numbers of these famous mills. The Bradley Pulverizer Co. of Boston, Mass., manufactures the Griffin mill. Its orders during January were: Penn Allen Portland Cement Co., Allentown, Pa., entire grinding machinery for its works; Lehigh Portland Cement Co., Orinrod, Pa., grinding machinery for new 2000-barrel plant; Quaker Portland Cement Co., Stockertown, Pa., grinding machinery for 4000-barrel plant; additional mills for Lehigh Portland Cement Co. at Mill D, in Mitchell, Ind.; Mill A, Orinrod, Pa.; Mill B, West Copley, Pa.; additional grinding machinery for Ironquels Portland Cement Co., Caledonia, N. Y.; Wolverine Portland Cement Co., Coldwater, Mich., and Bronson (Ohio) Portland Cement Co.

Northern Electrical Manufacturing Co.—This Madison (Wis.) company is now occupying the two wings just added to its works. These wings are occupied by the new power plant, machine shop, brass-working shop, packing and box factory departments. The power plant occupies the major portion of the larger addition, and is a new departure, as heretofore power and lighting were purchased from a local station. Direct-current motors are used in the shops to drive machines and tools. Two generating units supply the current for the day, while a 200-kilowatt Northern dynamo, direct-connected to a 225-horse-power Vilter Corliss engine, 100 R. P. M., and a 50-kilowatt Northern dynamo, direct-connected to a 75-horse-power Ball engine, 200 R. P. M., furnishes power for the night shift. A motor generator supplies generating current for the lighting system. Northern Electrical Manufacturing Co. is well known as manufacturing and installing direct and alternating current power-transmission machinery.

The Willans Engine.—In referring to the Willans engine in this department on January 22 it was inadvertently indicated that the Bradley Manufacturing Co.'s plant for manufacturing these engines is under construction. As a matter of fact, the plant has been complete for six months past. It was also indicated that the engines are to be made in sizes of twenty-five horse-power only. This was also an error, the truth being that no Willans engines smaller than 100 horse-power are made, and they are built up to 3000 horse-power. The Bradley Manufacturing Co. is of Pittsburg, Pa., and it is selling many of the Willans engines. These engines are well and favorably known to some of the most important users in the industrial world. Their efficiency, durability, economy and various other points of merit are constantly recommending them to manufacturers and operators about to invest in steam plants, and who want the very best possible results. These can be obtained with the Willans engines.

TRADE LITERATURE.

Dearborn Cabinets.—A leaflet has been issued by Dearborn Desk Co., Birmingham, Ala. It illustrates and describes the desks, typewriter cabinets and other specialties of the company.

Saw Repairing as a Fine Art.—Such is the title of a comprehensive booklet about saws that is being issued for the use of all operators. Its contents will be of material advantage to all progressive users of saws. The Southern Saw Works of Atlanta, Ga.,

issues the publication, and copies will be mailed to those requesting it. This company manufactures and repairs solid and inserted tooth circular saws.

Wickes Brothers.—This firm has issued its monthly stock-list, dated January 24. They manufacture and deal in machinery of all kinds. Main offices at Saginaw, Mich., with branches in the leading cities. Send for stock-list.

Plain Milling Machines.—Garvin Machine Co., Spring and Varick streets, New York, has issued a leaflet relative to its plain milling machines and its telegraphic code. The publication will interest old and new customers of the company. Send for copies.

The Harris Booklet.—A neat vestpocket memorandum booklet, with celluloid cover, has been issued by the C. S. Harris Company of Rome, N. Y. This company manufactures the Harris patent power hoisting and carrying machine, an illustration of which is seen on the booklet's cover.

Trevor Manufacturing Co.—Trevor machinery is extensively known and used with great satisfaction. It is built for making shingles, barrel heading, slack barrel staves, etc.; for cutting veneers and thin stock generally; for turning handles; for making ground wood pulp for paper manufacturing, etc. The Trevor Manufacturing Co. has now ready for distribution to inquirers its December catalogue. Address the main office and works at Lockport, N. Y.

Flat Sheet Enamelling.—C. N. Hooper, vitreous enamelling technologist, Fenelon Place, Dubuque, Iowa, has issued several interesting leaflets relative to flat sheet enamelling plants as designed by him. Mr. Hooper built a small plant at Grand Rapids for a refrigerator manufacturer. This plant is for porcelain enamelling sheet steel used as refrigerator linings to replace sheet zinc and other materials. The results attained have been highly satisfactory. Interested parties are invited to send for report on this subject.

Increased Cutting Speeds.—This subject is treated in a leaflet issued by the Crocker-Wheeler Company, manufacturer and electrical engineer, of Ampere, N. J. The equipment of machine tools and other machinery with modern methods of electric driving prompts the issuance of the treatise. The subject is an interesting one to the progressive manufacturer, and such should post themselves thoroughly. Send for leaflets about increased cutting speeds and about the Crocker-Wheeler machinery for electrical driving.

Drop Forgings.—Iron, steel, copper, bronze and aluminum drop forgings constitute a line of product that is in general use in the industrial world. Wrenches, spanners, handles, machine dogs, bolts, crankshafts, connecting rods, levers and various other articles are made from drop forgings. Messrs. J. H. Williams & Co. of 9 to 31 Richard street, Brooklyn, N. Y., have made a specialty of drop forgings. Their reputation is known to users of drop forgings as standing for the highest grade product. They have issued a new illustrated catalogue of their product. Inquiries are invited.

Gas and Gasoline Engines.—High-grade gas and gasoline engines enter more and more into the life of the industrial world. They have been installed in thousands of plants. Efficiency, durability, simplicity and economy are leading factors in the National Engine Co.'s engines. This company manufactures the high-grade gas and gasoline engines. Its plant at Rockford, Ill., is equipped with the best modern facilities for manufacturing, and its designs have given satisfying results to some of the most exacting power users in the country. A new catalogue descriptive of these machines has been issued.

Farrel & Bacon Crushing Machinery.—Ore and rock crushing machinery is an important class of equipment. It is used in most mining operations, and in many industrial operations. Modern methods have perfected these equipments, so that the most satisfactory results are attained. This is especially the case with the machinery built by the Farrel Foundry & Machine Co., Earle C. Bacon, engineer, Haveney Building, New York city. The fourth edition of Catalogue A of this company shows the Farrel & Bacon ore and rock crushing machinery, which has attained a reputation that is to be envied by less successful manufacturers. Complete crushing plants for any and every purpose is the specialty of the company, and its thirty years' experience enables it to furnish equipments that for material, workmanship and design are not surpassed.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., February 11.

During the past week the Baltimore stock market was generally dull. There was, as usual, some trading in United Railways, Seaboard and G. B. S. Breweries, but the prevailing lack of interest in the market displayed itself in a large falling off in the total of transactions. Barring the declaration of a stock dividend of 100 per cent. (\$1,100,000) by the George's Creek Coal & Iron Co., there was hardly anything to cause a ripple upon the surface of affairs. Some little interest was manifested in Cotton Duck because of the approaching meeting to act upon the question of payment of interest upon the income bonds, but there was scarcely any trading in the company's securities. Bank shares and trust-company stocks were steady, and the prices of investment securities were well sustained. In the dealings United Railways common sold at 13 $\frac{1}{4}$ and 13 $\frac{3}{4}$; the income bonds from 68 $\frac{1}{2}$ to 69 $\frac{1}{2}$, and the 4 per cents at 96 $\frac{1}{2}$ to 96 $\frac{3}{4}$. United Light & Power 4 $\frac{1}{2}$ s sold at 86 $\frac{1}{4}$ to 87. Consolidated Gas was traded in at 70 $\frac{1}{2}$ to 70 $\frac{3}{4}$, and the 6 per cent. bonds at 110 $\frac{1}{2}$. Seaboard common changed hands from 26 to 27; the preferred from 42 $\frac{1}{2}$ to 43; the 4 per cent. bonds at 84 and 84 $\frac{1}{2}$, and the 5 per cents from 102 $\frac{1}{2}$ to 103. Cotton Duck common sold at 5 $\frac{1}{2}$ to 6 $\frac{1}{2}$; the income bonds at 37 to 39, and the 5 per cents at 77 to 78 $\frac{1}{4}$. G. B. S. common was traded in at 14 $\frac{1}{2}$ to 15; the income bonds from 37 $\frac{1}{2}$ to 39 $\frac{1}{2}$, and the 1sts at 51 $\frac{1}{4}$ and 51 $\frac{3}{4}$.

In the trust-company group Maryland Trust sold at 200; Baltimore Trust & Guarantee at 312 and 312 $\frac{1}{2}$; Continental at 203 and 204, and Mercantile at 164 $\frac{1}{2}$; Maryland Casualty at 52. Marine Bank sold at 37 $\frac{1}{2}$ and 37 $\frac{3}{4}$; Howard Bank at 12 $\frac{1}{4}$; Bank of Baltimore at 120; Union Bank at 120; Citizens' Bank at 31 $\frac{1}{4}$, and Merchants' at 192.

Other securities traded in were as follows: Alabama Consolidated Coal & Iron common, 35 and 37; preferred, 84 and 84 $\frac{1}{2}$; Nashville Railway stock, 4 $\frac{1}{2}$; Nashville Street Railway 5s, 106 $\frac{1}{2}$ and 107; Atlantic Coast Line stock, 134 and 134 $\frac{1}{4}$; Atlantic Coast Line of Connecticut stock, 318; Atlantic Coast Line common, first instalment paid, 40 $\frac{1}{4}$ to 42; Atlantic Coast Line 4s, new, 89; do. 4s (Conn.), 93 $\frac{1}{2}$; do. 4s. (S. C.), 103; Baltimore City 3 $\frac{1}{2}$ s, 1928, 109 $\frac{1}{2}$ and 110; do. do. 1930, 110 and 110 $\frac{1}{2}$; Georgia Southern & Florida 5s, 114 $\frac{1}{2}$ to 114 $\frac{3}{4}$; Potomac Valley 5s, 114 to 115 $\frac{1}{4}$; Seaboard & Roanoke 5s, 112 $\frac{1}{2}$; Baltimore City Passenger 5s, 107 $\frac{1}{2}$; Montgomery 5s, 1907, 101 $\frac{1}{4}$ and 102; Western North Carolina 6s, 116; West Virginia Central 6s, 112 and 112 $\frac{1}{2}$; Anacostia & Potomac 5s, 100; Georgia Pacific first 6s, 123 $\frac{1}{2}$; Virginia Midland 1sts, 106 $\frac{1}{2}$; do. 5ths, 116; Charleston Consolidated Electric 5s, 95; City & Suburban 5s (D. C.), 90; Columbia & Greenville 1sts, 117 $\frac{1}{2}$; Wilmington & Weldon 5s, 120 $\frac{1}{2}$; North Carolina 4s, 102 and 104; North Baltimore 5s, 119 $\frac{1}{2}$; Northern Central 6s, 1904, 103 $\frac{1}{2}$; International Mercantile Marine preferred, 41 and 41 $\frac{1}{4}$, and Baltimore Brick at 9.

The State Bank of Chattanooga, Okla., capital \$5000, has been incorporated by George Bellamy, C. W. Beers, F. H. and Ray Wright of El Reno.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
February 11, 1903.

Railroad Stocks.	Par.	Bid.	Asked
Atlanta & Charlotte.....	100	185	...
Georgia Southern & Florida.....	100	50	...
Georgia Sou. & Fla. 1st Pref.....	100	98	...
Georgia Sou. & Fla. 2d Pref.....	100	78	81
Southern Railway (V. T.).....	100	36	...
Southern Railway (V. T.) Pref.....	100	95 $\frac{1}{2}$	...
United Railways & Elec. Co.....	50	13 $\frac{1}{4}$	14
Seaboard Railway Common.....	100	25 $\frac{1}{2}$	26 $\frac{1}{4}$
Seaboard Railway Preferred.....	100	42 $\frac{1}{2}$	43

Bank Stocks.	Par.	Bid.	Asked
Citizens' National Bank.....	10	31 $\frac{1}{2}$	32
Commercial & Far. Nat. Bank.....	100	132	140
Drovers & Mech. Nat. Bank.....	100	300	310 $\frac{1}{4}$
Farmers & Mer. Nat. Bank.....	40	69	...
First National Bank.....	100	160	175
German Bank.....	100	107 $\frac{1}{2}$	...
German-American Bank.....	100	102	...
Manufacturers' National Bk.....	100	100	...
Merchants' National Bank.....	100	150	195
National Bank of Baltimore.....	100	120	122
National Exchange Bank.....	100	194	...
National Howard Bank.....	10	11 $\frac{1}{4}$	12 $\frac{1}{4}$
National Marine Bank.....	30	37 $\frac{1}{2}$	...
National Mechanics' Bank.....	10	31 $\frac{1}{4}$	...
National Union Bank of Md.....	100	120	...
Old Town Bank.....	10	10	11

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked
American Bonding & Trust.....	50	87	90
Baltimore Trust & Guarantee.....	100	310	320
Continental Trust.....	100	203	205
International Trust.....	100	142	144 $\frac{1}{2}$
Maryland Trust.....	100	200	201
Mercantile Trust & Deposit.....	50	162 $\frac{1}{2}$	164 $\frac{1}{2}$
Union Trust.....	50	70	71
U. S. Fidelity & Guaranty.....	100	146	146 $\frac{1}{2}$

Miscellaneous Stocks.	Par.	Bid.	Asked
G. B. & S. Brewing Co.....	100	14 $\frac{1}{4}$	15
United Elec. L. & P. Pref.....	50	38	40
Cotton Duck Voting Trust.....	100	6 $\frac{1}{4}$	6 $\frac{3}{4}$
Consolidated Coal.....	100	88	95
George's Creek Coal.....	100	120	200
Consolidated Gas.....	100	70	71

Railroad Bonds.	Par.	Bid.	Asked
Atlanta & Charlotte 1st 7s, 1907.....	110	...	...
Char. Col. & Aug. 2d 7s, 1910.....	114	113	...
Columbia & Greenville 1st 6s, 1916.....	116 $\frac{1}{2}$	118 $\frac{1}{2}$	...
Georgia, Car. & North. 1st 5s, 1929.....	109 $\frac{1}{2}$	110 $\frac{1}{2}$	...
Georgia South. & Fla. 1st 5s, 1945.....	114 $\frac{1}{2}$	115 $\frac{1}{2}$	...
Georgia Pacific 1st 6s, 1922.....	122 $\frac{1}{2}$	124	...
Petersburg, Class A 5s, 1926.....	115	...	...
Raleigh & Augusta 1st 6s, 1926.....	122	123	...
Savannah, Fla. & West. 5s, 1934.....	115 $\frac{1}{2}$	...	...
Seaboard & Roanoke 6s, 1915.....	107	...	...
Seaboard & Roanoke 5s, 1928.....	112 $\frac{1}{2}$	...	...
Southern Railway Con. 5s, 1944.....	116 $\frac{1}{2}$	...	...
Virginia Midland 2d 6s, 1911.....	114 $\frac{1}{2}$	...	...
Virginia Midland 3d 6s, 1916.....	120	...	...
Virginia Midland 4th 3-4-5s, 1921.....	112	...	...
Virginia Midland 5th 5s, 1926.....	116	116 $\frac{1}{2}$	...
West. North Carolina Con. 6s, 1914.....	115 $\frac{1}{2}$	116 $\frac{1}{2}$	...
West Virginia Central 1st 6s, 1911.....	111 $\frac{1}{2}$	112	...
Wilmington, Col. & Aug. 6s, 1910.....	114 $\frac{1}{2}$	...	...
Wilmington & W. Gold 5s, 1935.....	120	...	...
Charleston City Railway 5s, 1923.....	105	...	...
Charleston Con. Electric 5s, 1939.....	95	96	...
Newport News & Old Pt. 5s, 1938.....	110	...	...
Norfolk Street Railway 5s, 1944.....	112 $\frac{1}{2}$	114	...
United Railways 1st 4s, 1949.....	96 $\frac{1}{2}$	96 $\frac{3}{4}$	...
United Railways Inc. 4s, 1949.....	68 $\frac{1}{2}$	68 $\frac{3}{4}$	...
Seaboard 4s.....	84	84 $\frac{1}{2}$	...
Seaboard 10-year 5s.....	102 $\frac{1}{2}$	103 $\frac{1}{4}$	...

Miscellaneous Bonds.	Par.	Bid.	Asked
Mt. V. & Woodby's Cot. Duck 5s.....	78	78 $\frac{1}{4}$	...
Mt. V. & Woodby's Cot. Duck Inc.....	37 $\frac{1}{4}$	38	...
G. B. & S. Brewing 1st 3-4s.....	51 $\frac{1}{2}$	52	...
G. B. & S. Brewing 2d Income.....	38 $\frac{1}{2}$	39 $\frac{1}{4}$	...
United Elec. Light & Power 4 $\frac{1}{2}$ s.....	86	86 $\frac{1}{4}$	...
Atlanta Gaslight 1st 5s, 1947.....	105	...	...
Consolidated Gas 6s, 1910.....	110 $\frac{1}{4}$	111	...
Consolidated Gas 5s, 1939.....	111 $\frac{1}{4}$	112 $\frac{1}{4}$	...

Charleston Clearing-House.

A clearing-house has been organized at Charleston, S. C., by the Bank of Charleston, the People's National Bank, the First National Bank, the Carolina Savings Bank, the South Carolina Loan & Trust Co., the Miners and Merchants' Bank, the Exchange Banking & Trust Co., the Enterprise Bank and the Columbia Banking & Trust Co. The officers elected are as follows: Henry P. Williams, president; E. H. Pringle, vice-president; W. King McDowell, secretary and treasurer; E. H. Sparkman, manager of clearing-house for the first month; Julian B. Calder, assistant manager.

The Birmingham Trust & Savings Co. of Birmingham, Ala., reports at the close of business February 6 total resources of \$3,387,855.77, including loans and discounts of \$1,855,003.38. The total deposits are \$2,728,659.16, while the capital amounts to \$500,000 and the surplus and undivided profits \$158,946.61.

The First National Bank of Birmingham, Ala., reports at the close of business February 6 total resources of \$5,810,509.09, including loans and discounts amounting to \$3,110,447.83. The total deposits are \$4,868,862.36. The capital is \$300,000, and the surplus and profits \$340,692.73.

The Denison, Bonham & New Orleans Railway of Texas has been authorized to issue \$325,000 of 30-year gold bonds.

TABLE OF CONTENTS.

EDITORIAL:	Page.
Astray.....	63
National Aid in Road-Building.....	63
A Clear Educational Note.....	63
Anti-Trust Legislation.....	64
Another Coal Strike?.....	64
The Uselessness of Commissions.....	64
For a Kindling Factory.....	64
A Study of the Mt. Pleasant Phosphate District.....	65
The Southern Outlook.....	65
Southern Pine-Product Factories.....	66
Southern Exhibits at St. Louis.....	66
In the Birmingham District.....	66
Brunswick's Steel Plant.....	67
In Cabin Creek District.....	67
Southern Topographic Maps.....	68
Progress at Norfolk.....	68
Big Lumber Deal.....	68
A Big Steamship.....	68
Briquetting Flue Dust.....	69
FOREIGN TRADE:	
Machinery for France.....	69
Pea-Canning Machinery.....	69
Tobacco Machinery for Egypt.....	69
RAILROADS:	
Electric Line in Kentucky.....	70
Rock Island's Deal.....	70
New Equipment Orders.....	70
'Frisco at New Orleans.....	70
Mr. Ramsey's New Duties.....	70
B. & O. Improvements.....	70
Mountain Park Railway.....	70
Special Rate Granted.....	70
Jackson to the Mississippi.....	70
Gulfport Terminals.....	70
Galveston's Seawall.....	70
One Year in Alabama Coal.....	70
TEXTILES:	
Round-Bale Fire Tests.....	71
\$150,000 Knitting Plant.....	71
The Cotton Movement.....	71
A 10,000-Spindle Mill.....	71
Adding 5000 Spindles.....	71
For 30,000 Spindles and 700 Looms.....	71
Textile Notes.....	71
Quotations of Cotton Yarns.....	71
Cottonseed-Oil Notes.....	72
LUMBER:	
Lumber Market Reviews:	
Baltimore.....	72
Brunswick.....	72
Jacksonville.....	72
Pensacola.....	72
Mobile.....	72
Memphis.....	72
Lumber Notes.....	73
PHOSPHATES:	
Phosphate Markets.....	73
Phosphate and Fertilizer Notes.....	73
To Develop Charlottesville.....	73
Iron and Steel Statistics.....	73
MECHANICAL:	
Self-Contained Feed Plant (Illus.).....	74
Overhead Conveying System (Illus.).....	74
Jeffrey Drying Machinery (Illus.).....	74
The Philadelphia Bourse.....	75
Lunkenheimer Mechanical Oil Cup (Ill.).....	75
New Single-Spindle Vertical Borer (Ill.).....	75
Trade Notes.....	75, 81
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	76
Building Notes.....	79
Railroad Construction.....	79
Machinery Wanted.....	80
Trade Literature.....	81
FINANCIAL NEWS:	
Review of the Baltimore Market.....	82
Securities at Baltimore.....	82
Charleston Clearing-House.....	82
The Alabama Home.....	30
Trust Company Deal.....	30
Gulf & Ship Island Earnings.....	30
New Bond Issue.....	30
Tennessee Trust Co.....	30
New Corporations.....	31
New Securities.....	31
Financial Notes.....	31
The City National Bank of Eastland, Texas, capital \$25,000, has been approved by the comptroller of the currency. The organizers are J. M. Wagstaff, Abilene, Texas; W. C. Lasley, W. G. Swenson, J. S. Oliver and W. B. Lewis.	
The First National Bank of Walters, Okla., has been authorized to begin business with \$25,000 capital. George W. Graham is president, and B. S. Coleman, cashier.	

[For Additional Financial News, See
Pages 30 and 31.]

2
2
2
2
2
2
2
3
3
3
3
3
4
4
4
5
5
5
6
79
79
80
81
82
82
82
80
80
80
80
80
81
81
81
81
=

d,
p-
y.
oi-
n-

rs,
si-
W.
nn,
-
ee